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Canadian Public Health Journal

Bovine Tuberculosis in Canada

A. E. CAMERON

A System of School Medical Inspection

F. S. BURKE

The Growth of the Sanitary Conscience

W. L. HUTTON

**Public Health Nursing Programme for
a Community of 5000**

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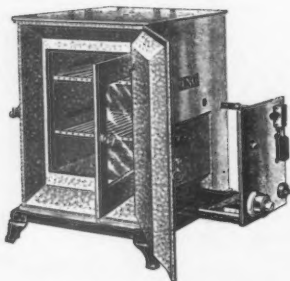
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Canadian Public Health Journal

VOL. XX

JANUARY, 1929

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The Prevalence and Extent of Bovine Tuberculosis in Canada*

A. E. CAMERON, M.C., V.S.

Chief Veterinary Inspector, Health of Animals Branch, Department of Agriculture, Ottawa, Canada

THE prevalence of bovine tuberculosis in Canada is of importance to the general public on account of the expenditure of public funds involved in its control, and also on account of the danger of infection being transmitted to human beings by means of milk and possibly meat products. The practical eradication of bovine tuberculosis, that is the reduction of infection to less than a half of one per cent, is possible within the next ten years, but the compensation cost for tuberculous animals would probably exceed ten million dollars. Thirty years ago the late Dr. Duncan McEachern, Chief Quarantine Officer at that time, asked for \$100,000 to control tuberculosis but this sum was not granted. If his estimate of the extent of tuberculosis infection at that period was correct and this sum had been available the subsequent expenditure of millions of dollars would have been avoided. Unless the Government of the day is composed of far-seeing men, who appreciate the situation fully, however, it is difficult to proceed much in advance of public opinion. Although this opportunity was lost, when there were less than five millions of cattle in the Dominion, nevertheless, tuberculin testing of cattle has proceeded concurrently with public opinion since free tuberculin testing was offered to livestock owners in 1897.

The first definite step forward was taken in 1903 when it was required that all cattle reacting to official tests must be permanently marked by having the letter "T" punched in the right ear. In 1905 the *Supervised Herd Plan* was inaugurated. Under this plan herds were tested, reactors slaughtered and measures taken to prevent reinfection of the herds but no compensation was paid.

Two years later, in 1907, the *Meat and Canned Foods Act* came into force. This act required the inspection of animals both before and

*Presented at the Annual Meeting, Canadian Public Health Association, Winnipeg, October, 1928.

after slaughter when any of the meat was to be exported from one province to another or to other countries. As the establishments operating under this act are distributed over the Dominion, information became available regarding the extent of tuberculosis in the cattle slaughtered for food purposes.

In 1914 the *Municipal Tuberculosis Order* was passed so that municipalities which desired to have their milk supply from tuberculosis-free herds could obtain the assistance of the Department of Agriculture. This was largely a public health measure and, although no more applications from municipalities are accepted under this order, it is of particular interest as it was the first policy under which compensation was paid for reacting cattle all of which were required to be slaughtered under supervision.

In 1919 the *Accredited Herd Plan* was commenced. This plan has been restricted to pure-bred breeding herds to encourage the testing of those herds likely to be distributing pure-bred animals throughout the country and thus prevent the starting of new centres of infection.

What is known in Canada as the *Restricted Area Plan* for the eradication of bovine tuberculosis was initiated in 1922. This is believed to be the most logical and satisfactory method of controlling tuberculosis. It is not subject to the caprice of the owner as are plans dealing with individual herds and the stockowner is free from the probability of infection from his neighbours' cattle. The Dominion Department of Agriculture has established "restricted areas" varying in extent in every province in Canada with the exception of Alberta.

The prevalence of bovine tuberculosis is dependent on a number of different factors, such as the amount of exposure, the virulence of infection, the number of additions to the herd, the method of stabling and the drinking arrangements. There is usually a greater amount of infection in dairy herds and in pure-bred herds. This is due to the number of additions made as well as to the very artificial conditions under which such cattle are maintained. Generally a heavy strain is placed upon the animals resulting from the efforts to obtain high production in conjunction with calf bearing. Animals under these conditions, if they are to maintain their resistance to disease, require a perfectly balanced ration, which is seldom forthcoming.

For these reasons it is very difficult to estimate the extent of infection in the country as a whole. When, however, the infection in a large number of individual herds is known and all the cattle in fairly extensive areas have been tested valuable data are available. These figures taken with the statistics furnished by the Meat Inspection Division covering millions of cattle slaughtered form a basis upon which an estimate may be made.

DATA FROM RESTRICTED AREA PLAN

In *Prince Edward Island* all the cattle in the province, 94,772 head, have been tested and only 0.59 per cent. was found tuberculous. It is interesting to note that since this test, advice has been received that in 2,000 cattle exported to Newfoundland for slaughter no case of tuberculosis was found on post mortem inspection. Packing establishments under the supervision of the Meat Inspection Division report a similar experience with cattle from this province. In *Nova Scotia* the testing of all cattle in the province, excluding Cape Breton Island, has just been completed. In 191,000 cattle tested 2.2 per cent were reactors. In *New Brunswick* a small area containing 4,745 cattle showed infection in only 0.67 per cent of the tested cattle. In *Quebec* an area was completed and then extended in which infection to the extent of 6.9 per cent was found in the 102,882 cattle tested. A further extension of this area which was recently completed had the rather alarming infection of 19.8 per cent in 67,357 cattle. The cattle in this district are for the most part dairy animals and in one county over twenty-five per cent of the cattle were removed for slaughter. There was nothing to indicate the variation in infection in the different counties in this area. In *Ontario* all the cattle in Prince Edward County, 24,184 head, have been tested. Of these 2.1 per cent reacted to tuberculin. The first area completed in Canada was the Carman area in *Manitoba*. At the initial test of the 22,892 cattle in this district there were 5.7 per cent tuberculous. This was subsequently reduced to 0.4 per cent. In *Saskatchewan* of 21,417 cattle tested in the Last Mountain area only 0.8 per cent were reactors. *British Columbia* has the Fraser Valley area which includes many dairy herds. Here 46,174 cattle were tested showing 7.9 per cent tuberculous. At the last test, infection had been reduced to 1.1 per cent.

SUMMARY

Province	Territory	Cattle tested	% positive
P.E.I.	Whole Province	94,772	0.59
N.S.	Whole Province excluding Cape Breton	191,000	2.2
N.B.	Small area	4,745	0.67
Quebec	One area	102,882	6.9
	One area	67,357	19.8
Ontario	Prince Edward County	24,184	2.1
Manitoba	Carman Area	22,892	5.7 (0.44 last test)
Saskatchewan	Last Mountain	21,417	0.8
Br. Columbia	Fraser Valley	46,174	7.9 (1.1 last test)

At the end of March 1928 the cattle tested with tuberculin in the different restricted areas totalled 510,357; of these 24,820, or 4.86 per cent, reacted and were slaughtered.

DATA FROM FEDERAL MEAT INSPECTION

The Meat and Canned Foods Division of the Health of Animals Branch have records of tuberculosis infection found in mature cattle since this service was organized. These records show that during the nineteen years from 1910 to 1928 tuberculosis in cattle (excluding calves) gradually increased from 2.96 per cent in 1910 to 7.41 per cent in 1925 and then decreased in the following years to 5.3 per cent in the year 1927-28. During the past five years ending March 31st, 1928, 4,988,536 cattle including calves have been slaughtered in establishments under inspection. The number of tuberculosis infected cattle (excluding calves) was 234,187. No complete record of the tuberculosis infected calves has been kept but an estimate of the infection in the 1,743,857 calves slaughtered during the above five year period has been made. This is based on 121,052 calves slaughtered during the past year among which the number of tuberculosis infected was 567 or 0.47 per cent. Accepting this figure as a fair average for calves the number infected in the calves slaughtered during the five year period would be 8,169. When this estimated figure is added to the number of infected mature cattle the percentage of tuberculosis infected carcasses found in the 4,988,536 cattle (including calves) slaughtered in the past five years is 4.85. (See table).

During the five year period 1924-1928, however, a total of 88,504 cattle which reacted to the tuberculin test in the field under the Municipal Tuberculosis Order, Accredited Herd Plan and Restricted Area Plan is included in the above figures. If this number of reacting cattle is deducted from the total number slaughtered and from the number of tuberculous carcasses found on post mortem inspection, the percentage is reduced to 3.14. This indicates the approximate percentage of infection which would be found if no eradication policy was being conducted in this field.

CATTLE SLAUGHTERED UNDER INSPECTION, 5 YEARS, 1924-1928

<i>No. of Animals Slaughtered</i>		<i>No. Found Tuberculous on Post Mortem Examination</i>	
Cattle (excluding calves)	3,244,679	Cattle (excluding calves)	234,187
Calves	1,743,857	*Calves (estimated at 0.47%)	8,169
	<hr/> 4,988,536		<hr/> 242,356 = 4.8%
Deduct reactors in official tuberculin tests	88,504		88,504
	<hr/> 4,900,032		<hr/> 153,852 = 3.14%

*Tuberculosis in calves based on 121,052 slaughtered under supervision in 1927-1928 which had 567 tuberculous.

DATA FROM THE SUPERVISED HERD PLAN, MUNICIPAL TUBERCULOSIS ORDER, AND ACCREDITED HERD PLAN

Under the *Supervised Herd Plan*, from 1921 to 1928, cattle numbering 17,272 were tested with tuberculin and 1,173 reactors were found or 6.79 per cent.

Under the *Municipal Tuberculosis Order* from 1914 to the end of March 1928, 208,787 cattle have been tested. The total number of reactors removed at the first and subsequent tests was 23,425 or 11.2 per cent.

Under the *Accredited Herd Plan* 368,887 cattle have been tested up to March 31st, 1928, and at the first and subsequent tests of those cattle 49,959 reactors have been uncovered, or 13.5 per cent.

Under the *Municipal Tuberculosis Order* and *Accredited Herd Plan* approximately ten per cent reactors are found when herds are first tested; additional reactors revealed by re-tests are those too recently infected to react at first, and others occurring from reinfection from one source or another, frequently the result of negligence on the part of the owner.

SUMMARY OF DATA COLLECTED

<i>Plan</i>	<i>Total tested</i>	<i>Slaughtered</i>
Restricted Area, 1922 to March 1928.....	510,357	4.86%
Meat Inspection, 1910 to March 1928.....	4,900,032	3.14%
Municipal T.B. Order 1914 to March 1928	208,787	11.2%
Accredited Herd, 1919 to March 1928.....	368,887	13.5%

SUMMARY.—These records show approximately five million cattle slaughtered for food, under inspection, with a tuberculosis infection of just over three per cent.

Over half a million cattle tested in various areas throughout the country revealed about five per cent with tuberculosis.

Over half a million cattle tested in individual herds, which are recognized to be most heavily infected, show approximately ten per cent infected with *B. tuberculosis* (although an average of over 12 per cent, reactors, have been removed from commencement to 1928 in maintaining these herds clean).

The infection in these six millions of cattle from all sources, all over the Dominion, covering a number of years, averages approximately four per cent. It would, therefore, appear to be justifiable to estimate that bovine tuberculosis infection in Canada at the present time does not exceed five per cent.

A System of School Medical Inspection*

F. S. BURKE, M.B.

Director of Medical Services, Department of Public Health, Toronto

WHEN your committee in charge of programme assigned me the paper "A Model System of School Medical Inspection", they selected a subject that is very full of controversial possibilities, as few, if any, cities carry out school medical inspection in the same way. For that reason I approach it with a certain amount of hesitation. We do not all agree as to what municipal department should carry out school medical inspection, *i.e.*, the Department of Health, or the Department of Education. We do not all agree whether it should be done by physicians, nurses or teachers, or a combination of the three. Our records are all dissimilar and our ideas on just how important school medical inspection is, and, if it is important, what special phase of it is the most important, do not agree.

By questioning the Fellows of the Rockefeller Foundation who come to us for certain work in public health, I am forced to the conclusion that more or less specialized work goes on in many cities. These men spend many months observing and I have endeavoured to get their views on the school work they have observed prior to coming to our department. These views vary. For example, one told me that in a certain city the emphasis was on posture, and that the authorities were directing their energy towards finding every "crooked" child as well as some who were not. In another city it seemed that perhaps an excessive amount of attention was paid to vision or to diet. I can quite understand this being true if examinations are made by volunteer or part-time physicians. They are bound to stress unconsciously the specialities towards which they lean, and this is an age of specialists. On the other hand, full-time physicians with a good knowledge of public health, are more liable to apply school medical inspection in its broadest sense.

Many years ago Dr. Hastings decided that school medical inspection was a very important part of public health, and he formulated his plans accordingly. Eleven years ago he took over from the Board of Education the school health service, and by a judicious and far-sighted policy he has evolved the system which I propose shortly to describe.

First of all let us consider some of the fundamentals. In what department of the city's government should this work be placed? We

*Presented at the annual meeting of the American Association of School Physicians, during the meeting of the American Public Health Association, Chicago, October 1928.

are thoroughly convinced, seeing that the work is largely in the field of preventive medicine, that it rightly belongs to the Department of Public Health. There are some excellent arguments for this, particularly the fact that the school health work can be successfully linked up, without any overlapping, with the health department's existing prenatal, child welfare, and pre-school activities and with the control of communicable diseases. We are convinced also that the actual work itself should be carried out by full-time physicians selected by the medical officer of health and possessing, if possible, the Diploma of Public Health. It is possible to demand from full-time physicians a quality of work in keeping with its importance. We are all aware that a municipality can pass by-laws dealing out public health *en masse*; this is an impersonal thing. But it is only at the school medical inspection that we have the opportunity of meeting the unit of population. It is there that the opportunity is given us to talk quietly and privately to the child and his mother. It is at the school medical examination that we have the one opportunity of bringing the human element to bear on the budding instincts of the child and at the same time to gain the mother's confidence and respect. Furthermore, these examinations take place when the child is at an impressionable age, in the building where he goes for all his learning; the work is carried out in an atmosphere which tends to make the child understand it to be part of his general education. The physician has the opportunity of laying the foundation for future periodic health examinations and above all, through his impersonal interest in the general welfare of the school child, he is armed with a powerful weapon for the defence of orthodox medicine and he can guide the parent back to the safest path known, that of the family physician. You must agree then that this work is worthy of the highest qualifications; its effects are too far-reaching to be placed in lesser hands.

For purposes of health administration Toronto has been divided into districts. The boundaries of these districts are influenced to a certain extent by natural barriers, such as watercourses or ravines and the main lines of railways, and by the number and size of schools, as it is important that the district medical officer should be able to complete his round of school work each year. One district is much like another in that it has approximately 60,000 to 70,000 inhabitants with about 10,000 school children. A district office is maintained at a strategic position and in most districts sufficient space has been found available in police stations. These offices are in no way intended for the reception of sick or for holding clinics but are solely for purposes of administration.

The personnel of a district office consists of the district medical officer, the district superintendent of nurses, eight or twelve nurses, all full-time, and the representative of the social agencies, in our case

the Neighbourhood Workers' Association, also full-time. Thus, we have a self-contained unit ready to deal with any routine question that may arise in that district, but, of course, referring any problems involving the policies of the Department to the Medical Officer of Health.

It is demanded of the district medical officer that he visit and work each school once a week, preferably on the same day and hour and maintain that schedule throughout the term. We have schools in which the doctor's weekly time-table has not changed in seven or eight years. This gives the district mothers an excellent opportunity to bring their problems to the school doctor and to discuss the welfare of their children. A district should have the equivalent of 10 schools of about 25 classrooms of 45 pupils. A district medical officer examines approximately 2,500 children per school year.

If I were asked, "What is the most important function of the school medical officer?" I should at once reply, "Health teaching"; and to accomplish that it is necessary that the mothers be present at the routine physical examination. Last year out of 22,000 children examined, 11,000 were accompanied by a parent. We consider it rather more important that the parent should accompany the six-year-olds, and our percentage of parents rises to about 70 per cent in this group.

The *examination* should be made with the consent and co-operation of the parent, and we have educated the public to this point where probably less than one per cent object to any type of examination. Four or five per cent tolerate our efforts with great Christian fortitude, but the balance are with us; some may be critical but they are not hostile. The examinations gain greatly in importance by being made in private, that is, mother and child, nurse and physician. The child should be stripped to the waist, except of course, in the case of the older girls, and each organ commented on as the work proceeds. For instance, it means very much more to the mother to be told that the child's lungs are sound than that the child is normal. I think we should never overlook the fact that to the parent it is just as necessary to stress the negative as the positive findings. Following the examination the findings should be summarized for the mother's benefit. When a defect is found I do not think it necessary for the district medical officer to attempt to make the ultimate diagnosis there and then. I think it is sufficient for him to decide whether or not a defect exists, whether the case needs either supervision or correction by the family doctor or hospital. He should make sure that the parent understands this and should describe the effect on the child's future career if the defect be left uncorrected. He should notify the family doctor* that the parent has been told of the existence of an apparently abnormal condition, and for the time being, that is as far as the matter should concern the district medical officer, the nurse making the next contact.

*See form letter to physician.

SYSTEM OF SCHOOL MEDICAL INSPECTION

9

(FORM LETTER)

Date.....

Dr.....

Dear Doctor,

I am instructed by Dr. Charles J. Hastings, Medical Officer of Health, to bring to your attention a school child by the name of

living at.....

and attending..... School
whose parents state that you are the family physician.

Owing to the opportunity afforded us for the almost constant observation of this pupil by teacher, nurse and finally the school physician, the following apparently abnormal condition has been noted and the parents advised to consult you.

.....
.....
.....

If there is anything that the Department of Public Health can do to aid in follow-up, subsequent to your treatment, please telephone the district office

Yours truly,

.....M.B.
District Medical Officer.

The time consumed by the examination of a normal child is 10 to 12 minutes, so that the physician can examine about 16 children per morning. To this must be added other miscellaneous work the nurse may present for solution. Amongst the older children whose history has been well followed throughout the school years, a better rate of approximately 20 examinations per morning can be attained.

A school medical officer should have sufficient time at his disposal to make a final examination of the pupils in the graduating class before they leave the public school system. He should check up on any abnormalities that have been recorded against a child, making a final comment on the card concerning them. But above all, he should give the child vocational guidance in case his school career should end at this time.

In the month of June, just before summer holidays, the defect files should be inspected, and each child with an abnormal condition should be seen in order to check up progress or otherwise and have

recorded upon his card anything of note. The findings of this review of the defects give each school nurse sufficient home visiting to carry her through the summer. It also gives her renewed assurance in pressing for action on old cases. It gives her a fresh list of urgent cases. It renews and freshens her interest generally.

The *number* of examinations in public school life, or the frequency with which we should make these regular physical examinations depends on several correlated activities. It depends on how close a contact or supervision the school nurse is able to maintain and at what intervals the district medical officer visits the school. If, for example, the school nurse visits the school daily and the school medical officer weekly, I believe that not more than two or three routine physical examinations are necessary in the public school life of a child. I think it is generally accepted that the majority of defects have already developed when a child reaches the age of 6 years. Between 6 and 12 years the new defects developing are largely those of vision and hearing and defects arising out of infectious diseases. Vision and hearing defects are usually soon detected by the teacher who has a daily opportunity of referring them to the nurse. Defects following infectious diseases are often reported when the child returns to school, following the release from isolation. If then we decide to do the minimum number of examinations with adequate follow-up, I would suggest a thorough examination of every child upon entering the junior-first class. This usually represents an average age of 6 years. At this examination will be found any abnormal condition militating against a normal school career. Past experience has shown us that 35 per cent of this age group have abnormalities. Parents as a whole are willing to co-operate in the correction of defects if one can prove that the existing defect will prevent the child from doing well in class. The next routine physical examination is carried out in the junior-fourth class. This represents an average age of 11-12 years, and amongst other things this examination should be the starting point of vocational guidance in those who have permanent abnormalities. This age group averages about 30 per cent abnormalities most of which have made their appearance since the primary examination in the first class.

These two routine examinations in Jr. 1st and Jr. IVth are sufficient for the majority of pupils but there is another group, the dull normals, whom we are liable to overlook unless we institute an examination by age and not by academic attainment. In other words there is a substantial group who are not in the special classes for the mentally retarded, yet never advance beyond a certain point in their studies, and who do not get to the Jr. IVth by the time they are 12 years old. It is suggested then to ask each principal annually for a list of those pupils who are 12 years old in all grades under the Jr. IVth. This plan gives these children a yearly examination and these are the ones

above all others who require vocational guidance. The other groups that should receive more than average attention and not less than one routine physical examination per year are those in the sight-saving, deaf and "hard of hearing", mentally retarded and open air classrooms, also in the forest schools; in other words, all children selected for any form of auxiliary teaching should receive more than the ordinary amount of medical supervision. Pupils in classes for crippled children should be seen by a psychiatrist as well as by the school medical officer.

THE DIVISION OF NURSING

Perhaps no group is so intimately woven into the fabric of school medical inspection as the school nurses. It is they who are largely responsible for linking the school with the home. The school nurse's tactful approach to a mother often hastens the medical or surgical action that converts a defect into a termination. It is not a difficult task to find defects in the school child, nor is the finding of them particularly significant in the light of our present knowledge, but the termination of these defects is a vital problem, that largely falls to the nurse.

If the school medical officer fails to impress a mother with need for action, or if the mother is not present, the task must then become the nurse's. The adequacy of nurse follow-up is reflected in the percentage of terminations secured, not forgetting the quality of the work.

The health teaching in a school should centre around the nurse and she should be aided by the school physician. Furthermore, a school nurse's training should be such that she is equipped to undertake a large part of the health teaching, thus keeping that important function where it seems to logically belong.

DENTAL SERVICES

This important function is carried out under the supervision of a Director, who has a staff of surveying and operative dentists, certain of the latter being extraction specialists.

The records of dental surveying and subsequent treatments and terminations are made entirely by the dental service, although the school nurse assists by arranging the dental appointments. In the summary of the year's work, a few cases will be noted under No. 8, "Dental"; these are children who are referred to the dentist, because of some very abnormal condition urgently requiring attention.

MENTAL HYGIENE

This new science, as applied to school medical inspection, is directed by a psychiatrist, who has a staff of psychologists and social workers. When one considers what can be done for the mentally retarded and problem school child, if placed in a suitable "milieu", one is at a loss to account for any procrastination in attempting something in their behalf. Mental hygiene must be an integral part of every well thought out school medical programme.

A card that follows a child through his school life and is so designed that it permits a succession of entries relating to both his physical status and his medical and surgical history seems the logical way to keep the record. The scheme that I am most familiar with has a record of academic career on one side of the card and the record of physical career on the other. This card is taken charge of by the educational authorities and forwarded from class to class and school to school. This of course immediately demands a standard card and a standard method of making entries of defects and the correction of defects. I have received from time to time the physical records forwarded with children from distant points. These, while interesting, were not easily interpreted by me, and in most instances I could not tell whether the observations noted on the history were made by teacher, nurse or physician. If this Association of School Physicians does nothing else, it should see to it that entries on the medical record of school children are at least the observations of a qualified medical practitioner.

FIGURE 1

[illegible]

The accompanying form shows that part of our permanent medical record card that is used for recording the defects found. On a section of the card not shown in the figure are recorded other details of the child's medical history, notes, etc. The entries are the findings of the

school physician and are made by him. The physician's daily report of work done has on it a summary form that exactly corresponds in arrangement and nomenclature to the permanent school medical record card. This arrangement is very familiar to the physician, and to fill in daily a summary of his findings of defects and terminations is but the work of a moment. As all schools are recorded separately a summary form must be completed for each school visited in the day. Summarizing these at the end of the year gives a fairly accurate accounting of our work. It permits us to balance the books.

TABLE I

DEFECTS ACCORDING TO NATURE OF DEFECT AND GRADE OF PUPIL

School Medical Inspection—Toronto, 1927

Classification	Junior	Senior	Total
1. Vision.....	497	379	876
2. Hearing.....	138	93	231
3. Eye.....	103	51	154
4. Ear.....	56	34	90
5. Nasal.....	1211	388	1599
6. Tonsil.....	2168	734	2902
7. Anaemic Appearance.....	172	61	233
8. Dental.....	5	2	7
9. Digestive.....	10	1	11
10. Enlarged Glands.....	162	17	179
11. Skin.....	17	20	37
12. Orthopedic.....	67	24	91
13. Malnutrition.....	537	371	908
14. Pulmonary.....	44	12	56
15. Cardiac.....	148	95	243
16. Nervous.....	81	51	132
17. Thyroid.....	123	249	372
18. Other Defects.....	22	14	36
19. Mental Retardation.....	12	2	14
Total.....	5575	2598	8171

Table I shows a summary of the defects found in one year in Toronto schools. This summary, like that of terminations is readily made, owing to the classification of defects, by a clerk in the central office.

I would like to explain, too, a system of recording the *termination* of defects that we have employed for about two years. Prior to the employment of this scheme we felt that we knew only too little of the actual manner in which the defects were disposed of. Heretofore the recording of terminations had been the duty of the nursing division on decisions made by both the school physician and nurse. The difference

in the percentage of terminations secured by the various districts had a tendency from time to time of injecting a spirit of competition into the recording of terminations that possibly made our results more colorful. Under the present scheme the entire work of deciding and recording is in the hands of the district medical officer who records daily his decisions under five heads coded as A, B, C, D, E.

Termination of defect by medical or surgical action.....	A.
Termination of defect by natural means.....	B.
Defect known to be under adequate medical and home care.....	C.
Difference of medical opinion.....	D.
No action obtained by us (<i>i.e.</i> , lost address, left school, etc.)....	E.

Let us examine each singly—

A.—*Termination of Defect by Medical or Surgical Action*

This is one where the remedy has been complete, and constitutes 65.8 per cent of all terminations.

B. *Termination of Defect by Natural Means*

This shows us how accurate was the summing up of the condition in the first instance. If the defect subsides with time to the point where it can no longer be considered as such, then how accurate was our diagnosis? This should eventually improve both our ability to diagnose and prognose. This group constitutes 13 per cent of our terminations.

C. *Defect under Adequate Medical and Home Care*

This is useful because it permits us to dispose of a type of defect, of which there are many and in which the school medical service has no further action. The future supervision of the case has been undertaken by a duly qualified medical practitioner, the only person whom we can recognize as responsible. 9.3 per cent of terminations were recorded in this group.

D. *Difference of Medical Opinion*

This is where the medical authorities to whom we refer the cases for treatment do not agree with our diagnoses or that the children need treatment. We do not argue these cases as a rule because it is our policy not to break the faith of a family in the family physician. 2.6 per cent fell in this group in 1927.

Terminations under E—No action Obtained

An E termination is resorted to only when no further progress towards securing correction is possible, and is designed to be used largely at the final survey of children in the graduating class. E terminations are used in the junior rooms when it is found that the family

are Christian Scientists or have moved away, or there has occurred some such happening beyond our control and which heretofore we had no way of recording. 9.6 per cent of all recorded terminations were under this heading.

TABLE II

TERMINATIONS OF DEFECTS ACCORDING TO CLASSIFICATION AND TO GRADE OF PUPIL

School Medical Inspection—Toronto, 1927

Classification of Defect	Terminations												
	A		B		C		D		E		Total		
	Jr.	Sr.	Jr.	Sr.	Jr.	Sr.	Jr.	Sr.	Jr.	Sr.	Jr.	Sr.	Total
1. Vision.....	301	279	21	41	10	25	13	13	15	43	360	401	761
2. Hearing.....	31	12	25	25	12	14	..	..	1	6	69	57	126
3. Eye.....	32	14	6	14	4	8	9	2	4	6	55	44	99
4. Ear.....	35	16	8	4	3	6	2	..	..	2	48	28	76
5. Nasal.....	1120	429	32	87	16	45	15	23	40	111	1223	695	1918
6. Tonsil.....	1466	648	39	118	18	86	26	50	80	237	1629	1139	2768
7. Anaemic Appearance....	18	11	29	62	4	14	1	1	5	11	57	99	156
9. Digestive....	4	1	2	1	..	2	..	..	..	..	6	4	10
10. Enlarged Glands....	34	8	25	59	8	16	..	..	9	16	76	99	175
11. Skin.....	7	8	2	5	1	4	..	..	..	1	10	18	28
12. Orthopedic...	11	3	2	1	7	7	..	..	3	..	23	11	34
13. Malnutrition.	47	62	84	133	15	48	..	8	11	25	157	276	433
14. Pulmonary...	5	..	6	6	9	9	..	..	2	..	22	15	37
15. Cardiac.....	4	10	5	14	26	63	..	5	1	11	36	103	139
16. Nervous.....	12	8	6	18	5	12	1	2	..	1	24	41	65
17. Thyroid.....	8	21	26	18	33	131	1	10	5	33	73	213	286
18. Other Defects	6	2	3	2	..	..	..	..	1	..	10	4	14
Total.....	3141	1532	321	608	171	490	68	114	177	503	3878	3247	7125
	4673		929		661		182		680		7125		
Percentage of Recorded Terminations....	65.5		13.0		9.3		2.6		9.6		100.0		

Table II shows a summary of the defect-terminations in one school year in Toronto. It will be recognized that while the terminations tabulated do not necessarily correspond or refer to the defects found in the same year, and the totals, therefore, do not agree, a very large percentage of the terminations under A, C, D, are in reality terminations of defects found in the same year. In fact, the majority of defects terminated under A, medical or surgical action, are so terminated within three months of the finding of the defects. Taken over

a series of years the total terminations do agree approximately with the total defects found.

It would appear to me that through this new organization, the American Association of School Physicians, formed as it is within the American Public Health Association, lies the direct road to a wide-spread improvement in the whole machinery of school medical inspection. At the present time much excellent work is being done in an individual way using individual methods, but each stressing the thing that is uppermost in his mind.

CONCLUSIONS.—1. It is better to give thorough examinations at longer intervals with adequate follow-up by the nurses than superficial examinations yearly.

2. It is better for the physician to visit the school weekly, doing as much as his time allows, than to work the school daily until finished and not revisit the school until the next term. This throws too much responsibility on the nurse, causing her at times to make decisions she should not be called upon to make.

3. The same type and extent of examination with similar records, should be demanded from all in order that the work may be comparable. Research studies by the school medical officer should not supplant or interfere with the routine examination.

"From Aristotle to Darwin two permanent truths lie always in the background—the inborn *nature* of living things, and their cultivation by *nurture*. It is the nature of man which is predominant. It is on that we build, though we build by nurture. In a word, *Preventive Medicine means the organization of human nurture*—the cultivation and health of maternity, infancy, childhood, adolescence, adult life, old age, the postponement of mortality; and such cultivation means not only the central and local provision of medical and sanitary agencies for the fuller control of morbid processes but the development of the body and mind of man that they may reach, in each individual, the top of their capacity. Nothing is more certain than the fact that the physical advancement and health of mankind is dependent not upon a 'doctor's stunt' here or a 'sanitary institution' there, but upon the whole social evolution of the people."

(*Annual Report of the Chief Medical Officer of the Ministry of Health (England) for the year 1927*).

The Growth of the Sanitary Conscience*

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THE modern public health movement has driven those twin scourges, malaria and yellow fever, from the tropics, and has caused typhoid fever to vanish from many communities, where thirty years ago or less it was a regular visitor. Diphtheria has yielded before the onslaughts of antitoxin and now that toxoid has arrived, it may disappear altogether. Modern science has great achievements to its credit, but it has not controlled cancer or influenza, or measles, and it had no part in the disappearance of typhus fever and bubonic plague from many lands where formerly it was endemic. Long before the dawn of these modern days, leprosy was effectively controlled, and even in our own day without apparent reason, and certainly without assistance from medical science, chlorosis has almost disappeared.

It is evident that below the surface and hidden from view, certain influences have been working and are still working to augment or modify the disease history of man. How or when mankind first developed a sanitary conscience is mere conjecture, but undoubtedly the ancient Egyptians like the ancient Greeks were devotees of the bath, and Herodotus bears witness to the state of the public health where he says "And indeed, the Egyptians, next to the Libyans, are the most healthy race in the world." Tuberculosis was not unknown, however, for the tell-tale picture of Potts' disease has been found in a mummy of the twenty-first dynasty (1000 B.C.). The pictures and records of the Babylonian baths show that a real sanitary conscience had developed among that people, and the excavations of huge drains prove that sewage disposal was not neglected. The public health movement had its real beginnings among the ancient Hebrews, and the precepts of Leviticus with their minute directions for the control of communicable diseases were undoubtedly of great value. It was the Hebrews who gave to us that venerable institution, the Sabbath day. The health benefit accruing to mankind from the observance of this age-old custom is beyond computation.

It remained, however, to the Grecian era for the real meaning of hygiene to permeate an entire people. The dignity of the human body, for the first time, received full recognition. The desire for the best in

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life produced those fundamental psychological conditions necessary for a great forward movement of the human race, and the results achieved in art and science far surpass those of any other age. It has been suggested that Grecian civilization faded away before the ravages of malaria, and if this is so, it is an interesting speculation to consider the possible results to the subsequent history of the world had Hippocrates or Aristotle anticipated the work of Ross in proving that malaria is transmitted through a mosquito. Even at that, it may be that the ancient Greeks had some conception of the disease importance of the mosquito for Empedocles is said to have checked an epidemic by draining swampy lands. Be the cause what it may, the fact remains that Grecian civilization ceased to be an energizing force. The desire for improvement lost its momentum and the widespread development of a sanitary conscience was delayed for another two thousand years.

Throughout the succeeding centuries, the neglect of sanitation and hygiene was paid for with the flesh and blood of millions of human beings. Leprosy was probably the only disease to be effectively controlled. Typhus fever undoubtedly was rampant, and bubonic plague swept through the land leaving behind the mere remnants of a people. At the close of the 11th century the population of England was not more than one million and a half. The culminating point in the disease history of Europe was reached with the Black Death (bubonic plague) which appeared first in Italy in 1347 A.D. Boccassio in the *Decameron* gives a graphic description of the terror inspired by this dread visitation. The disease spread across Europe and swept through England in 1348. One quarter of the entire population of Europe (twenty-five million people) perished during the plague. The Romanticists would have us believe that these were the days of chivalry and romance. In truth they were only a part of the painful evolutionary progress of mankind; for even in those dark days evidences were not wanting that a new spirit was brooding in the heart of man, and that a desire for a richer life was not dead. The Crusaders undoubtedly spread broadcast the seeds of disease, but they also brought Eastern ideas to the Western world, and perhaps learnt some of the value of cleanliness from the Turks. Certainly they brought home with them the ideas of the bath, for shortly afterwards the bath-houses of Europe became familiar. No age is without the spirit of progress which can create Gothic art, establish gilds, extend commerce, build great universities and produce a Roger Bacon. Nevertheless, the lives of the people were lived in filth and squalor, and the picture we get of Europe in the middle ages is a picture of dirty yards and dirty streets with carrion birds in evidence everywhere, growing and multiplying among the abundant refuse. Chimneyless homes dotted the countryside, and the cow, and the poultry lived in the homes of the people. In the yard of every home the eye would meet the familiar pig as though it were the

symbol of an unsanitary age. Some of our most charming fairy tales come down to us from the Middle Ages and suggestive and illuminating is the frequency with which these stories intertwine the lives of rats and mice with the lives of the people. The truth is that rats and mice were provided with abundant opportunities to live and to multiply. Under such circumstances is it any wonder that bubonic plague impressed itself on all historians? Plague continued in England from the time of the Black Death to the Great Plague of London in 1665 A.D. but social changes of vast importance were also taking place. The shortage of labourers caused by the Black Death, and the resulting chaos led to thirty years of friction between the landowners, who were faced with the necessity of paying high wages, and the peasants, who struggled to maintain and increase their standard of living. In the result the manorial demesnes were split up into small farms, from whence sprung the sturdy yeomanry, which were to be the pride of England. A new outlook on life gradually came to the people, a freedom and a feeling of equality which slowly led to the awakening of a sanitary conscience. The cities grew and intensified the poor living conditions of the people, but hastened the day of sanitary reforms. Rickets made its appearance. The spread of learning by the Greek scholars, who were driven from Constantinople by the Turks, the discovery of printing and the vast increase in the number of schools, were not without their effects. But even in high places ideas of personal hygiene had made but little headway. The celebrated Samuel Pepys, with his customary frankness tells us that on Jan. 23rd, 1666; "I have itched mightily these six or seven days, and when all comes to all she finds that I am lousy, and so cut my hair close to my head, and so with much content to bed." And again on the 22nd of November, 1668, he tells us "My wife and I lay long with mighty content, and so rose, and she spent the whole day making herself clean, after four or five weeks being in continued dirt." The social changes and the new outlook on life were accompanied by a vast intellectual ferment. In medicine we find the reawakening of Anatomy preparing the way for a more accurate conception of physiology, and the publication of Harvey's "De Motu Cordis" in 1628 finally breaking the bonds which had strangled medical progress since Galen's day. In the same year Malpighi was born, who later was to see the blood passing through the capillaries, a sight which was denied to Harvey. Sydenham, the new Hippocrates, appeared on the scene, and of greater import than all these events, the black rat (*Rattus, rattus*) disappeared, and was replaced by the brown rat (*Rattus Norvegicus*). To Lieut.-Colonel W. G. Liston, I.M.S., belongs the credit of having first pointed out that the disappearance of plague from Europe in the 17th and 18th centuries coincided in point of time with the appearance of the sewer rat and the disappearance of the house rat, and in the Milroy lectures of 1924,

he graphically describes the tame confiding temperament of the black house rat, which thrived in the unsanitary environment of the middle ages and thrives under like conditions in India to-day. On the other hand the brown sewer rat is a scary creature, afraid of man, hiding in the sewer not because he likes it, but because it is a safe place. The freedom of this continent from plague is not due to the protection afforded by an efficient quarantine service, for this service has not prevented the ground squirrels of California from becoming infected with plague. It is solely due to the development of a sanitary conscience among the people generally.

The disappearance of chlorosis has probably resulted from the revolution in the dress of women, which has given them release from the constriction of tight corsets, and permits the free functioning of the abdominal organs. A mere male must also admire and envy their short skirts, low necks, and sleeveless dresses. The hygienic advantages of such dress is obvious, and a similar revolution in the male attire is long overdue.

Dominating the field of medicine to-day, is the problem of cancer, with its remarkable increase in all civilized countries. Its comparative rarity among uncivilized races, and its relative rarity in the province of Quebec as compared with the province of Ontario, have caused many minds to speculate on the underlying causes of this phenomenon. What habits do we indulge in to increase our susceptibility to cancer? What foods do we eat to render us more liable to contract the disease? Or what is the combination of factors working to increase the cancer incidence? We do not know. Neither did the physicians of England at the time of the great plague of London understand the cause of the plague, though the cause was present in their own homes.

The comparatively slight improvement in sanitary habits manifest by the most highly civilized sections of the human race, has banished bubonic plague, and typhus fever. Medievalism in habits still holds sway, however, and we must wait for the full development of modernism to achieve the sanitary ideal of a world free from those communicable diseases which are spread by the human secretions from man to man.

The average modern individual believes but half-heartedly in the value of the simple cleanliness which soap and water brings, and dirty germ-laden hands are the rule. Public appreciation of the value and necessity of oral hygiene is woefully lacking. Disgusting habits of expectorating in public places are all too common, and coughing and sneezing are not recognized as the disease menace which they are.

With the full development of sanitary and hygienic habits, tuberculosis, for example, would disappear, and scarlet fever would become as rare as typhoid fever.

Health officers have no greater task, and no more insistent duty than the education of the public in the value of hygienic habits and sanitary surroundings.

The Public Health Nursing Programme in the Community of 5,000 People*

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THE Public Health Nursing Programme in a Community of 5,000 people is not so very different from that of its bigger sister, except in that it carries perhaps a greater responsibility, as well as many times a greater limitation, for the public health programme in the small community is so often forced to take under its wing the service that in larger places would be cared for by the special organization. We cannot fail to see that health cannot be promoted in the family where there is not sufficient food to properly sustain life. Wherever we find people grouped together in settlements, we will find all classes, from the rich to the very poor and even the slum, varying perhaps only in area from that of the city. And while family social work cannot be regularly delegated to the public health nursing programme, yet, many times, in the small community we must work through it before we can hope to reach our goal. We must then seek to give to the single service the best qualified nurse available, for, as "much will be required of her" she should have at least some knowledge of nutrition and mental hygiene as well as a good public health training and a well balanced judgment.

In outlining our programme we must, of course, have fully in mind the basic principles that are essential to a permanent service: (1) legal foundation of some kind,—provincial, municipal, or private organization; (2) proper financial support that will ensure good leadership in the form of trained workers; (3) co-operation of the board of health and of the physicians, who after all are the guardians of the community health. With the board of health interested and co-operating there is assured the very basis for good public health work: pure water, safe milk and proper sanitation.

The small unit calls almost entirely for the generalized service, teaching each member of the community the rules that underlie health, for we must keep always in mind that teaching is our main function whether it be at the bedside, in the class or clinic, or in the home visit. And so if we are to start at the very beginning, looking toward the goal—the preservation of life and the prevention of disease—we

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must then concern ourselves first with the *expectant mothers*. These divide themselves at once into two distinct classes: first, the happy-faced, bright-eyed mother, revelling in the joy of a new life, eager for knowledge, with one supreme wish that her baby may be well born and her life protected. She has her own physician, but, busy with many things, the days slip by quickly and she fails to consult him until she has passed into the danger zone. The nurse, visiting regularly, in addition to urging that she consult her doctor early, frequently will give her much instruction in the proper care of herself, of her diet, and, in general, in the rules of hygienic living. And we may here sometimes forestall the advice of the kindly neighbour, "who is always with us." Then we have across from these the pale-faced, overworked, undernourished mother with hardly enough means to cover the daily need and nothing left for medical care for herself. She sees, perhaps, no joy in a new life, only an added burden, and it is to this group, as a public health organization, we owe much. While we regret that many times these cases are not reported until very late, yet the nurse carrying on the generalized programme soon grows to know the expectant mothers in her area.

The *prenatal contact* must be most carefully and tactfully made, but once established, the nurse gets very close to the mother and may observe the very detail of her daily life. So often she is the only medical contact the woman has until her confinement, and so great is her responsibility to watch for the small danger signals and thus forestall disaster. Where prenatal clinics have been established by the medical association or the hospital, the nurse working in close touch with these has found her hand indeed strengthened. Or when the clinic is not indicated, the mothers' class will be of great value as a time saving device, bringing the mothers together for group instruction and for personal checking up. These classes, however, do not have a doctor in attendance and are without value from the point of medical examination. Always, of course, must we give first place to the regular systematic home visit where the real personal contact is made.

And just here may we speak of the nursing service as a very real part of any public health nursing programme and especially of that in the small community. The present day nursing programme has left far behind it the older conception of "just care of the sick" and has struck out on the other foot, until now it is considered to be playing a very large part in the educational programme. The nurse who has been called by the family and has given a specific service has indeed an "abundant entrance" into that home, and as she works she teaches,—teaches, however, from a first-hand knowledge of conditions as they exist, and may it not be that, in her comings and goings in that home, she has been permitted a peep into the ice-box, the pantry, etc., which might have been denied her as a purely educational visitor?

Who can over-estimate the value of trained *obstetrical care* during the confinement period and the post-partum care following? A good prenatal programme may prove useless if proper care cannot be provided for the confinement and post-partum. Truly the baby who has been born, protected by skilled care from the avoidable accidents of birth and carried through his first danger days, will surely be launched into the child welfare division unhandicapped. Then the mother who has been taught the proper nursing procedures in the care of her family has surely benefited greatly from an educational standpoint. For, after all, the care of the sick can only be given through a well instructed family.

Following the prenatal period with that of the confinement and post-partum care, we must look to the third and very important phase of the nurse's work,—her *child welfare programme*. There are here, however, many things to be studied carefully if an effective programme is to be instituted, for the small community usually places a financial limitation that may in turn limit us in regard to the required number of workers. We must then map out a very concise and clear-cut programme if we are to draw the greatest possible interest on our investment. We may well look carefully into the matter of birth registration and infant mortality, as expressed in terms of follow-up work.

Let us divide the child health programme into three distinct phases: 1. Infant; 2. Pre-school; 3. School. The infant work again is divided into three methods: 1. Clinics; 2. Home visits; 3. Other instruction.

The *clinic*, to the nurse seeking to do a full programme in the small community, is of the greatest value, for the well-equipped clinic for medical examination and supervision of the infants and young children will enable the nurse to give considerable group instruction and, with an accurate knowledge of weight and development, she will be able to grade her home visits in proportion to the need. The clinic may be held in some central place, and when it is under the direction of the medical association it proves most successful. The clinic visit will, of necessity, be followed many times by home visits for the purpose of individual instruction and demonstration and to see that instructions are understood by the mother and interpreted into terms of the home.

When the clinic is impractical, the *baby conference* may be substituted where the time would be given entirely to weighing and measuring and giving instructions, with no doctor in attendance.

We must not forget the babies who for any reason are not able to attend clinics or conferences and need the special care of the nurse. These must come under the secondary heading of *regular home visits*. Along with these organized efforts much can be done through an educational attempt toward personal hygiene with special emphasis

on infant hygiene. This effort might be made through community classes or a "Little Mother's League" when time will permit.

Perhaps no part of the child's life is so neglected as the years from 2 to 6, known as the pre-school period. It is during these years that the baby becomes displaced by the new arrival and he just goes along, either growing normally or developing the various defects of mouth, teeth, and eyes, or the more serious defects of bones through faulty nutrition. In many cases these defects go unnoticed until the child enters school, and he must of necessity then enter school handicapped. And we feel that when the public health nursing programme can give to the pre-school child his place in the preventive work so that he may start his school career with teeth, throat and eyes in good condition, vaccinated, and immunized against diphtheria, his school record will tell a different story. This service may best be done through clinics and by constantly urging the parents to have their pre-school children examined by their physician and the defects corrected. It is perhaps in the pre-school child programme that we are hemmed in with our greatest limitations.

The *school health* supervision is a large branch of the public health programme, that may come under the generalized nursing or may be cared for by the Department of Education. This supervision is given for a five-fold purpose: 1. To discover physical and mental defects; 2. To protect the community from the spread of communicable disease; 3. For physical education; 4. For teaching the principles of healthy living; 5. To ensure proper sanitation of school buildings. With a definite programme well arranged it would be hard to estimate the value of this phase of public health work, in terms of health education. We must remember, however, that the best school work can be done in the prenatal and the pre-school years.

In communicable disease control the public health nurse plays a very definite part, for, as she goes about through her community in close touch with the individual family, the finding and reporting of suspicious cases may forestall an epidemic. It is here that she must work in close co-operation with the medical officer of health, visiting the families of reported cases, instructing the family in the conduct of quarantine and isolation and demonstrating, if necessary, the technique of nursing care.

There must so often come under the generalized programme that other great branch with which public health is so concerned to-day,—*tuberculosis*. While the whole public health programme is working steadily toward the defeat of this great enemy, yet it has thrown such a mantle over the community that much intensive educational work must be done if we are to gain any headway in the situation. The clinic where expert examination may be given the active as well as the contact case is perhaps of the greatest value. The follow-up visits should

be regular and systematic and it is to our home teaching that we must look for the final routing of the enemy. Whether this phase of the work is under the generalized programme or under the department of health, it must be considered one of most importance.

Let us look back and sum up our programme, prepared as it has been to cover the field of sickness prevention and care as well as health education. And while we may feel that our limitations so outrun our possibilities—and we are overwhelmed when we consider the need for this complete health service,—yet let us have patience, realizing that the baby must creep before he walks, and walk before he runs. And may we then be determined to give to our mothers, who are so quietly laying the foundations of our country, the help and support they so sorely need, and to the children, who are our Canada of to-morrow, the privilege of being well born and launched out with a whole rudder and a full sail, as we hand over to them the destiny of our nation.

"The history of this problem for the past hundred years teaches most emphatically that the treatment of goiter is very unsatisfactory and accomplishes little toward the control of the disease. Those attacking the problem from the viewpoint of preventive medicine—physiologists, biochemists, and public health organizations—have accumulated sufficient evidence to justify the assertion that endemic goiter is the easiest known disease to prevent. By further detailed study of the fundamental principles underlying the cause and prevention and with the constant application of scientific data by the state health organizations, we should see the fulfilment of our prediction: Within another generation there will be no endemic goiter problem."

(*Endemic Goiter and Public Health*—O. P. Kimball, M.D., *American Journal of Public Health*, May, 1928).

The Position and Prospects of the Sanitary Inspector*

ERNEST W. J. HAGUE

Chief Health Inspector, City of Winnipeg

SIR EDWIN CHADWICK was born in England in 1800 and died in 1890. In the *Jubilee History of the Royal Sanitary Institute*, published in 1926, a review of his life is given from which the following extracts are taken:

"In 1834 Chadwick was appointed secretary to the newly instituted Poor Laws Commission. The first Sanitary Commission to investigate the general sanitary conditions of the labouring population of Great Britain was appointed at Chadwick's instigation; and Chadwick was the author of the commission's report. This report showed the serious and wide-spread nature of the sanitary evils from which the labouring classes suffered—the failure to remove excretal refuse from houses where no drains or sewers existed and hand labour or cartage had to be resorted to; the inadequacy and polluted condition of many urban water supplies, and the lack of, or incompetency of sanitary officers to investigate or remedy insanitary conditions. This report attracted wide attention, and was the first awakener of the public conscience as to the necessity for sanitary reform.

"Chadwick was an active supporter of the Sanitary Institute in its very early days, and was a member of its first Council. (The Institute was founded in 1876).

"There is probably no man to whom this Country (England) owes more for its present relatively sound condition of public health and efficient sanitary administration than it does to Edwin Chadwick. He was the earliest of pioneers of sanitary reform, when the idea of disease being preventable was hardly recognized. In consequence he had many difficulties and much obstruction to overcome, both from some of his colleagues and fellow Commissioners, and from departmental sources. He was ever sympathetic with the sufferings of the poor, possessed insight into the possibilities of the alleviation of these sufferings, and showed extraordinary industry in the execution of his work. His courage and perseverance eventually overcame all obstacles, and resulted in the enactment of legislation for the benefit of the people that formed a model and an inspiration for all civilized nations." Truly

*Presidential Address to the Fifteenth Annual Convention of the Sanitary Inspectors' Association of Canada, held at Vancouver, B.C., September 5th, 6th, and 7th, 1928.

an epitaph worth having! But from that day to the present time there has been a continuous change for the better. The environment of man has been immeasurably improved since the days of Chadwick, but even yet there is much to be done. Our great cities grow larger and older. Until recently the principal stress was laid on improving the environment of man, (a notable exception in the early years was the discovery of vaccination). Typhoid fever has been reduced tremendously, principally by the safeguarding of water supplies. Like typhoid fever, cholera, typhus fever, yellow fever, malaria, hook-worm, plague, etc., are all diseases in which man's environment is an important factor. We know that all of these and some other diseases also can be entirely prevented if it were possible to apply in full the knowledge that we have already. The fact remains, however, that notwithstanding the great victories of the past, we may not cease to be vigilant, and must not relax our efforts. The elaborate machinery set up for the protection of man's environment must be maintained in a smoothly working condition. Every once in a while local epidemics, due to carelessness, illustrate this very clearly. This alone means constant work for health departments the world over. In all of this work the sanitary inspector has been, and is, an important factor.

But public health work to-day is expanding its viewpoint. Serious enquiry is made, for instance, as to why we have so much sickness other than communicable disease. Why such a loss of time and money annually? Is all this sickness inevitable? Can it be prevented? Can we not advance and control the diseases not commonly classed as communicable, but which cut short the life of man, or which keep us under par and not able to be of as much use as we might be in the world? Now the investigators are turning the search light on man himself, to the problems of race, colour, heredity, habits, fatigue, immunity, clothing, diet, the effects of hazards in industry, mental hygiene, etc. Research workers throughout the world are engaged on these problems. Their findings are published in the numerous medical and public health journals. Sometimes these findings may be premature or inconclusive. But one man's work, although not conclusive, often casts a gleam of light which is of help to other investigators, and thus gradually the secret processes of nature are becoming better understood. Wonderful as are the great discoveries already made, we shall doubtless become able to control or prevent many more diseases. New discoveries will come revealing the manner in which diseases are transmitted, and the effects of food, clothing, sunlight, ventilation, etc., upon the well-being of man.

I said that these findings are published by those who discover them. They are published in order that they may be put to practical use by the army of public health workers. The sum total of this knowledge is so great, and the investigations cover such a large field,

that no single public health worker can hope to have a thorough knowledge of it all. Some of the information is of use to one class of worker, and some to others. But it is possible for us all to know a little about all the fields which are being explored, and how they are correlated; and each worker in a specific line can of course follow up his specialty more thoroughly.

To-day is the day of persuasion rather than force; of education rather than compulsion. The work of educating the public is the most important duty of all public health workers. We must have the co-operation of the people. The research workers give their findings before professional meetings and in technical books or journals. It then devolves on health officers, sanitary inspectors, and public health nurses to apply this knowledge, always being first sure that it is thoroughly proven, and not the propaganda of some faddist. It must not be mere theory or unfinished investigation. Sometimes these findings are brought to legislative bodies and become crystallized into law. In educating the public it is often necessary to translate the scientific and technical language used by research workers into more simple language, so that the people may understand and make use of the new ideas in their daily lives.

Now as to the position of the sanitary inspector in this new health work: Remember that he has for years borne his part well in the struggle for better health conditions. Health officers in England and elsewhere freely acknowledge this. The English Sanitary Inspectors' Association is recognized as an important factor in health matters over there, because the well trained and educated sanitary inspector has been in the forefront of the battle for fifty years or more. True, a great deal too much of his time is taken up in dealing with conditions in regard to cleanliness, and the abatement of nuisances, but this work must be done by somebody and health departments are, by common consent and usage, elected to do it. Unfortunately in large cities on this continent the sanitary inspector is liable to develop into a specialist in one line of work only, such as communicable diseases prevention, engineering and sanitation, smoke prevention, food or dairy inspection. But for all that the training of a sanitary inspector must be such as to render him capable of looking after all these kinds of work.

Seeing also that the sanitary inspector must be one of those engaged in disseminating knowledge about health, it follows that he must devote much time to reading and study. If he does not do this he may find himself arguing with citizens who know more about the subject than he does himself; for the general public, thanks to popular articles and radio lectures, absorbs a good deal of sanitary knowledge in these days. It is true that the ideas absorbed by it are sometimes hazy, or even erroneous. My point is that the sanitary inspector should be up-to-date and able to impart accurate information. There

are many new hazards to-day in industrial life and even in our homes. New chemical preparations are used in processes, sometimes before the effect on the health of those making or using such substances has been properly tested. Noxious gases are generated which escape and injure the health of workers. Even in dwellings and apartment blocks we have the new hazards of electric refrigeration using noxious gases, and the use of the various quick-drying paints and varnishes which may be dangerous. Insecticides bearing fancy names, but which generate hydro-cyanic acid gas are freely sold; fruit and vegetables are often sprayed with arsenic. Always new problems are before us.

It is not enough to-day to inspect premises in regard to cleanliness, sanitary conveniences, light, ventilation, etc., we must also know how to look for hazards which are often unseen. The same principle is involved whether one is investigating communicable diseases, milk, foods or water; much more knowledge is required to-day on the part of the inspector.

The strange thing is that in Canada the employing authorities do not all show their recognition of this by refusing to engage any new inspector unless he is properly trained and certificated. Only in a few places in Canada do we find regulations which forbid the employment of unqualified inspectors. It is regrettable that so many health officers do not appear to pay much attention to this important matter; and yet it is difficult to imagine any one measure which would render the work of a health officer more effective. A health officer, no matter how highly qualified, cannot do all the work of a health department himself. He must delegate most of the inspection work to his subordinates. The better qualified these men are for the work, the greater the effectiveness of the health department. Neither the American Public Health Association nor the Canadian Public Health Association has as yet taken up this question officially.

One of the objects of our Sanitary Inspectors' Association of Canada is to obtain insertion in the Public Health Act of each province in Canada of a section providing that in the case of all future appointments to the position of a sanitary inspector, none but a properly trained and certificated person shall be engaged.

Probably one reason why we have not yet wholly succeeded in this object lies in the fact that most rural municipalities throughout Canada are not financially able to maintain a full-time health staff. The health officers of these rural municipalities are practising physicians who receive only a modest honorarium for their services. Only a small part of their time can be given to the duties of medical officer of health. Many municipalities have no sanitary inspector or public health nurse; or perhaps one man may act as chief of police, sanitary inspector, license inspector and what not. Nor does the ordinary rural municipality require a full-time health staff. There is not

enough work for such, and the expense would be too great. And yet the rural districts require a much better and more expert health service than they now receive. The provincial governments recognize this fact and a movement has been inaugurated for the formation of health districts embracing several municipalities, each equipped with a full-time staff consisting of a medical officer of health, sanitary inspector, public health nurse, and a secretary or clerk. Each of these officials should have special training in public health work.

Such units have been in operation in some parts of the United States for several years. England and Scotland have also made use of this system which has proved to be effective. The Province of Quebec made a start a year or two ago, and Manitoba has such an experiment under way. Health experts are emphatic in declaring that effective health service must be supplied to rural Canada and that this system must be extended if we are to progress. It is more than likely then that the next decade will see a vast extension of the scheme throughout Canada.

From our point of view then it would seem that, whilst under the present system of health administration it is impossible for financial reasons to require every rural municipality to appoint only certificated sanitary inspectors, this objection will be removed once the health district plan is introduced. The cost of the staff, including the district medical health officer, the sanitary inspector, public health nurse and clerk, will be spread over a large taxable area. Possibly the provincial governments will contribute and in some instances the Rockefeller Foundation is assisting in getting this plan started. The whole scheme, however, will not bring the results anticipated unless the personnel of the staffs is carefully selected and properly trained. If the district health officers and the nurses selected for this work are required to be qualified, so also must the sanitary inspectors.

The Sanitary Inspectors' Association of Canada should carefully watch developments and be prepared as occasion may arise to urge our claims for full recognition as a necessary part of this new scheme. There seems to be a tendency already in some quarters to consider the work of the public health nurse as more necessary for the success of the plan than is that of the sanitary inspector, or at all events to economize by appointing a nurse only. This false economy we should combat. The work of the nurse and that of the inspector are different. Both are necessary for the success of the plan. Nurses cannot do our work any more than we can do theirs. Are the nurses to be required to supervise water supplies, sewerage, plumbing, foods, dairies, housing conditions, nuisances, and other duties which it takes a capable man to handle? Can they deal effectively with municipal authorities, property owners, or recalcitrant offenders? Can they discuss the proper remedies to be applied in each case, and consult with owners

and advise as to the best and most economical methods of effecting necessary improvements?

We should be able to guarantee that as fast as trained inspectors are required they shall be available. Examination boards in each province should be put in working order, so that the excuse may not be made that there are no certificated inspectors available. As regards cities, even now only certificated inspectors should be appointed. This is being recognized. Only last month at a meeting of the newly formed Alberta Public Health Officials' Association a resolution was passed that all inspectors in future appointed should possess a certificate of the Royal Sanitary Institute, or its equivalent. The Brittain Report on the classification of civic employees in Winnipeg also recommends this standard, which has in fact been adopted in that city.

Under the new plan which I have been outlining to you the district health officers, sanitary inspectors, and public health nurses appointed will be expected to do a good deal of educational work amongst the people. The sanitary inspector must therefore look to his laurels and qualify himself to take his rightful place in the scheme.

The traditions of the Sanitary Inspectors' Associations in England, Scotland and the British Dominions show a quiet, steady, upward movement as regards the sanitary inspector in better education, higher qualifications and wider reading.

It remains for us to uphold these traditions, and to step fearlessly forward, for ours is no mean profession.

PROGRAMME OF THE 18TH ANNUAL MEETING OF THE CANADIAN PUBLIC HEALTH ASSOCIATION

The Programme Committee of the Association will be pleased to receive titles of papers for presentation at the 18th Annual Meeting to be held in the City of Montreal on June 18, 19, 20, 21, 1929. Members desiring to present papers are requested to communicate with the Chairman of the Programme Committee, Dr. A. Grant Fleming, Faculty of Medicine, McGill University, or with the General Secretary before the first of March.

Canadian Public Health Association

OFFICERS for 1929



Honorary President:
THE HON. DR. E. W. MONTGOMERY
*Minister of Health and
Public Welfare,
Province of Manitoba.*



President:
DR. NORMAN MACL. HARRIS,
*Chief, Laboratories of Hygiene,
Department of Pensions and
National Health, Ottawa.*

Editorials

CANADIAN PUBLIC HEALTH JOURNAL

COMMENCING its twentieth volume with this issue, this Journal assumes the name "CANADIAN PUBLIC HEALTH JOURNAL." The new title signalizes the completion of arrangements by which the Canadian Public Health Association has become the owner and publisher of the Journal.

The Journal has been continuously published for nineteen years, first appearing in January, 1910, a few months prior to the incorporation of the Canadian Public Health Association. Although the official organ of the Association, it was privately owned and published by the York Publishing Company. For several years the company met with success in its efforts, but shortly after the commencement of the war such difficulties were encountered that it appeared unlikely that the publication of the Journal could be continued. At this juncture, a group of members of the Association, who attended the annual meeting held in Ottawa in 1917, undertook to continue the Journal in order to hold it for the Association. These members included Drs. J. G. FitzGerald, Alan Brown, George E. Smith, James Morton, E. C. Trow, George D. Porter and Gordon Bates. To carry on the Journal required the continuation of the York Publishing Company and the assumption of considerable financial obligations. In 1920 the Executive Council of the Association assumed a share in the responsibilities of the Journal by acquiring a block of shares in the York Publishing Company. Again, on this occasion a number of our members contributed generously to make this possible.

During the past four years efforts have been made by the Executive Committee to formulate plans for the future of the Association and for the acquiring of the Journal. As a result, last year the responsibility for the publication was assumed by the Association jointly with the York Publishing Company, and an option to purchase the Journal was granted to the Association by the owners of the Journal on the most favourable terms. The annual meeting at Winnipeg last October endorsed the purchase and the Journal is now the property of the Association. It is indeed most gratifying to those members of our

Association, who maintained the Journal for us during many trying years, to know that their efforts were not in vain and that the CANADIAN PUBLIC HEALTH JOURNAL is now the Association's own property.

RETIREMENT OF DR. A. C. JOST

The retirement of Dr. A. C. Jost from the position of Provincial Medical Officer of Health for the Province of Nova Scotia is viewed with extreme regret by all who are associated either directly or indirectly with the public health movement in Canada. Dr. Jost, while inherently conservative, has a wider than average vision, and is intensely interested in any movement that has for its objective the public good. He has the requisite background which is necessary to the successful administrator, and by the exercise of sound leadership, aided by an engaging personality, he has done much for public health in Nova Scotia. Dr. Jost has been a regular contributor to THE JOURNAL and has been for many years a member of the Executive Council of The Canadian Public Health Association.

It is a pleasure to learn that Dr. Jost has been appointed the Executive Officer of the State Board of Health of Delaware. This appointment following so quickly on his retirement from the Provincial Department of Health of Nova Scotia, bespeaks the high esteem in which he is held by the Public Health Officials in the United States as well as in Canada. Our regret, however, is none the less keen that his services are at present lost to the public health movement in the Dominion.

NUTRITION

LEXA DENNE, B.A. and ANDREW HUNTER, M.A., M.B., Ch.B. Edin.

INFANT FEEDING

ALAN BROWN, M.B.

THE feeding of infants nowadays is relatively simple if one keeps in mind the essential principles involved, but unfortunately owing to the lack of appreciation of many of these fundamental axioms it is usually considered quite a complex procedure.

In the feeding of infants certain definite requirements must be met:

1. Sufficient calories should be supplied.
2. The food must contain a minimum amount of fat, protein, carbohydrate, mineral salts, water and the four accessory factors "A" "B" "C" and "D".
3. Should be free from harmful bacteria.
4. Must be capable of digestion by the infant in the amounts given.

It has been shown by ample clinical experiences that any feeding that complies with the above requirements will be successful as long as the individual is not suffering from any enteral or paraenteral infection. Frequently, however, some of the essential elements of the diet are omitted, for instance, an insufficient total amount may be given on account of too much dilution, or the food may be too strong or it may even be contaminated by harmful bacteria.

Provided the essential points, how-

ever, are carefully followed it is quite possible to feed normal infants with excellent results on mixtures containing nothing more than cow's milk, water and added sugar up to six months of age and after this added cereal and vegetable.

Failure to give sufficient food in the form of calories is probably the most frequent error in infant feeding. The average well baby requires 50 calories per lb. of body weight per day, while a substandard or undernourished infant will fail to thrive unless he receives almost as many calories as a normal infant at the same age. The calculation of the calories is extremely simple when one remembers that whole milk contains 20 calories and sugar 120 per ounce.

The second point to bear in mind is that sufficient fat, carbohydrate, minerals, and vitamins be given. The fat, protein and mineral requirements may be met if the infant receives $1\frac{1}{2}$ ounces of whole milk per pound of expected body weight, while the extra amount of carbohydrate may be added by giving at least 1 ounce of extra sugar to infants under 12 lbs. and $1\frac{1}{2}$ ounces to those over 12 lbs. Frequently infants will tolerate up to 2 or 3 ounces of added sugar without showing any ill effects.

It should, however, be borne in mind that too much sugar is likely to pro-

duce hydremia, with a lessened resistance to disease.

When the above indications are complied with there is a sufficiency of vitamine "B". It is essential nevertheless to fortify the food with additional "A" and "D" vitamins in the form of biologically tested cod liver oil, 1 teaspoonful three times a day, while the "C" vitamine can be ensured by using at least 2 teaspoonsful of orange juice each 24 hours.

Pigment, such as is contained in green vegetables, especially spinach, should be added at the sixth month in order to augment the hemoglobin molecule; the observance of this point will prevent the alimentary anemia so common in infants from the sixth to the eighteenth month.

The final requirement may easily be fulfilled by boiling all milk supplied to infants, which in addition to removing the harmful bacteria makes the food more digestible.

These simple mixtures then are all that are required in feeding normal infants and in many instances sick infants. If therefore an infant so fed suddenly becomes ill with vomiting, diarrhoea or a fever, it may safely be assumed that the food is not at fault. The most probable explanation will lie in the fact that the baby has an infection such as a head cold, grippe, or in female infants a pyelitis, and the treatment in such instances will naturally be the removal of the source of the infection.

INDUSTRIAL HYGIENE

F. G. PEDLEY, B.A., M.B., D.P.H.; J. G. CUNNINGHAM, B.A., M.B., D.P.H.

OCCUPATIONAL MORTALITY, FERTILITY AND INFANT MORTALITY

*The Registrar-General's Decennial Supplement,
England and Wales 1921, Part 2
H. M. Stationery Office, London, 1927*

SINCE 1851 the Registrar-General of England and Wales has published decennially the mortality of occupied males for the three years beginning each decade. The latest report refers to the experience of 1921, 1922 and 1923. Quoting from the introduction: "The present report differs from its predecessors mainly because for the first time it distinguishes occupations on purely occupational lines. The effect of this is to accentuate contrast between the

mortalities of the occupations compared, the real differences having previously been understated. For the records of an unhealthy occupation are no longer, as before, diluted by inclusion of those for other workers, industrially or otherwise related, but not subject to the same occupational risk. An instance of the effect of this change, quoted in the General Report, is the case of the cutlery grinders. These workers, who are subject to special silica risk, were formerly grouped with all others concerned in the manufacture of cutlery, many of whom are subject to no special risk, under the heading "cutler, scissors maker", with the result that the

mortality of the composite group in 1910-1912 exceeded the average by 62 per cent. For 1921-1923, however, we have figures relating to the actual grinders of cutlery (*i.e.*, men classed occupationally as metal grinders, and industrially as employed in the cutlery trade), and it is found that the corresponding excess of their mortality is no less than 230 per cent. This may be regarded as a new revelation of occupational risk, for the results of the old classification gave no indication of such an extreme degree of mortality excess. But even apart from such sensational results, of which the case of the cutlery grinders forms the best example, the new classification throws much additional light on occupational mortality as showing on which workers the risk falls in industries already known to involve special danger to life. The pottery trade furnishes an example of this." For this reason the report is not comparable with the previous reports, but this lack of compara-

bility is compensated for by the increased detail given.

It is unfortunate that no such records are available for Canada or the United States. In 1909 the United States Census Bureau undertook a study of occupational mortality in the United States, but for various reasons death rates were not given. The Dominion Bureau of Statistics publishes annually the number of deaths by age and occupation of males in the Canadian Registration Area, but does not attempt to compute rates.

The report in question is divided into five parts: Introduction, Social and Occupational Distribution of Mortality from Various Causes, Occupational Mortality of Occupation Groups, Occupational Fertility and Occupational Infant Mortality.

In the first section the industrial population is divided into five groups according to social and economic status. Group 1 comprises the best paid class, Group 5 the worst paid

MORTALITY OF DIFFERENT SOCIAL CLASSES COMPARED TO THAT OF ALL OCCUPIED AND RETIRED MALES

	Social Class according to pay					Occupied and Retired Civilians
	*1	2	3	4	5	
All causes.....	812	942	951	1007	1258	1000
Respiratory Tuberculosis.....	80.0	138.0	159.8	164.2	229.0	163.5
Cancer, all sites.....	102.5	118.1	127.1	123.8	157.8	128.4
Diabetes.....	15.2	17.7	11.2	9.2	8.1	12.2
Cerebral haemorrhage, &c....	39.7	46.2	44.7	42.3	48.5	44.9
Valvular disease of heart.....	36.1	57.2	61.1	67.3	80.9	63.4
Pneumonia.....	70.5	71.6	76.2	91.1	127.8	85.1
Appendicitis.....	15.1	12.7	7.9	7.5	6.2	8.9
Chronic nephritis.....	34.3	38.9	33.4	31.4	36.7	34.5
Accident.....	39.9	34.5	46.8	63.8	59.2	49.3

*See text.

The various causes of death are analysed in detail with respect to occupation and social status, but cannot be abstracted here.

two occupations enjoy a mortality 1/40 of that of the copper and tin miners. The death rate from respiratory tuberculosis of Anglican clergymen at age 55-64 is 52 per 100,000, that of the underground copper and tin miners of the same age group is 4,188 per 100,000. These figures are given in order to illustrate the information which may be obtained from the report.

In the sections on occupational fertility and infant mortality information is given regarding the legitimate fertility and infant mortality in the five social groups and in the various occupations classified according to the occupation of the fathers. Illegitimate fertility and the mortality of illegitimate infants are reported according to the occupation of the mothers. The data supplied here should be of great value to child welfare workers.

For a more detailed analysis of the Registrar-General's report the reader is referred to *Occupational Mortality Among Males in England and Wales, 1921-1923; A Summary of the Report of the Registrar-General*, R. H. Britten, *Public Health Reports*, 43, 1565-1616, June 22, 1928.

EIGHTEENTH ANNUAL MEETING
CANADIAN PUBLIC HEALTH ASSOCIATION
MONTREAL, P.Q., JUNE 18th, 19th, 20th, 1929

EPIDEMIOLOGY AND VITAL STATISTICS

A. C. JOST, M.D., AND NEIL E. MCKINNON, M.B.

TYPHOID FEVER EPIDEMIC IN DUNDAS, ONTARIO, SEPTEMBER, 1928

THE following account has been received from Dr. Thos. A. Bertram, Medical Officer of Health, Dundas, Ontario.

"Dundas, with a population slightly over five thousand, had an epidemic of typhoid fever in September 1928. There were thirteen cases, eleven of which originated between the eighth and eleventh of September. One case developed two days after coming to town from an outside source, and the other was a secondary case in which inoculation had been refused. Ten of the cases occurred on one street stretched over a distance of a third of a mile, and six of these were children from three to six years of age.

The municipal supply of water is by gravity from a creek one mile above the town. There is a mechanical filter and chlorination plant and the bacteriological tests have been as a rule satisfactory.

As all the cases were supplied with milk from the same dairy the route of infection pointed rather definitely in this direction. The dairy was closed pending an investigation. A blood Widal was taken of all the employees and producers but, with one exception, all were negative. One examination of the feces in the case was negative. The exact source was not definitely located.

As to the dairy itself, the thermograph for the past three weeks was properly registered, and the dairyman was conforming to the requirements. The pasteurizer showed a *cold end in the outlet pipe* and the *capping was done by hand*. These defects were immediately remedied and the dairyman allowed to resume business.

In any event this would show that all plants should be placed under the Department of Health, Ontario, to be standardized and inspected, the same as the water supplies."

REPORTED CASES OF CERTAIN COMMUNICABLE DISEASES IN CANADA BY PROVINCES—NOVEMBER, 1928

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
Diphtheria....	18	45	293	210	97	42	56	150
Scarlet Fever..	116	54	628	316	110	67	171	42
Measles.....	9	2	162	709	46	13	3	5
Whooping Cough.....	55	—	71	335	46	39	9	17
German Measles....	1	—	*	15	*	14	1	7
Mumps.....	—	201	*	329	121	26	80	95
Smallpox.....	—	—	192	16	35	27	11	65
Cerebrospinal Meningitis..	—	—	—	5	1	1	3	3
Anterior Poliomyelitis	3	—	2	16	4	—	9	3
Typhoid Fever	3	15	65	41	3	4	8	3

*Not reportable.

PUBLIC HEALTH NURSING

RUBY M. SIMPSON, REG.N., AND FLORENCE H. M. EMORY, REG.N.

THE SIGNIFICANCE OF MENTAL HYGIENE IN PUBLIC HEALTH NURSING

GLADYS A. BASTEDO, R.N.

UNTIL recent years the conception of the public health nurse in regard to mental hygiene was largely that of providing institutional care for the mentally ill and the feeble-minded. With her scant knowledge of mental disease, the patient was seldom recognized by the nurse until the psychosis had progressed to such a degree that he became a menace to himself and to those around him. The nurse co-operated in lodging him within an institution, where he would be safely guarded and would probably spend his remaining days until death brought release. For the mental defective who was incapable of maintaining his existence without custodial care, the institution seemed the only haven. Frequently through the efforts of the public health nurse, reluctant parents placed their poor unfortunates under such care, pleading for re-assurance that they would receive kind treatment. In each case the possibility of constructive work appeared so slight that the public health nurse came to regard mental hygiene nursing as a necessary evil, at once hopeless and discouraging.

The first ray of hope appeared when the original aim of the mental hygiene movement, that of improving hospital conditions for these patients, was extended to a world-wide programme for the prevention of mental

disorders and the development of habits of healthful mental activity. When our conception of mental deficiency broadened to include more than idiocy and imbecility the interest of the nurse first became stimulated in the school. Many children who had dragged unhappily along in the regular classroom were removed to special classes, where a suitable social and vocational training prepared them for useful and contented lives. With the happy placement of these children the teachers turned to the nurses for aid in many other difficulties among children of apparently normal intelligence. There was Johnny, a bright lad who stole pencils, money, rings or anything within reach, and lied regarding these misdemeanors; Bill, the persistent truant upon whom teachers, Big Brothers and the Juvenile Court failed to have any effect; the occasional sex delinquent with whom one was in doubt how to deal; the child who bit his nails, twitched and jerked upon any unusual strain; Mary, that big girl of fifteen, who continually sucked her thumb; the would-be invalid who kept a path worn to the nurse with a pain here, an ache there or a sore finger or toe; the child who vomited, or attempted in order to create a commotion or escape the boredom of the classroom: all com-

plaints without any physical basis; and last, but not least, that unpleasant addition to the classroom, the child with enuresis. In following many of these children to their homes to gain some explanation of their difficulties, it was found that they were but factors in a larger problem. Parents were at war with one another or their children, in some cases shielding and coddling with too lax discipline and in others ruling with a rod of iron. Other apparently insurmountable difficulties were encountered, from the expectant mother who refused to seek early supervision and the infant with sleeping and feeding peculiarities, to the child who through disobedience or temper tantrums began to be unmanageable in the pre-school age.

Since mental hygiene has removed the scales from our eyes we recognize these problems to be what they really are—mental hygiene problems, and realize that this branch of the public health movement permeates all other branches. Psychologists and psychiatrists have shown us that many cases of mental disease and maladjustment, causing inefficiency and unhappiness in later life, can be traced to just such problems of childhood and infancy. They are teaching us to search for causes of adverse behaviour and indicating how we may share in the treatment of these readjustments. They are giving us a working knowledge of child psychology and are showing us how the principles of prevention may be applied in child training, so that the individual may become adjusted to his or her environment. Nursery schools with their training groups

are guiding parents to a new attitude toward the child. Psychiatrists are treating behaviour problems within our schools and homes, while institutions are providing greater facilities for the treatment and education of the mentally sick and deficient, with the hope of placing them back in the community under supervision as self-supporting, useful citizens.

The significance of the mental hygiene movement to the public health nurse, in her daily and intimate contact with mothers, fathers, teachers and physicians cannot be too strongly emphasized. She can play a vital part in her community in teaching that the child health phase of mental hygiene is the corner stone of mental health for coming generations.

PUBLIC HEALTH NURSES PARTICIPATE IN RECENT HEALTH CONFERENCES

This Department notes with peculiar interest the success of the sessions of the Public Health Nursing Section of the Canadian Public Health Association held in Winnipeg in October. In the enforced absence of the Chairman, Miss Jean Browne, Toronto, Miss Elizabeth Russell of Winnipeg presided. A large attendance at each session reflected the enthusiasm of nurses residing in the western provinces and the effective efforts of the Chairman of the Section and of its Secretary, Miss Nora Moore, Toronto. More nurses from the province outside of Winnipeg would have attended, had it not been for pressure of work at a time when advantage

must be taken of the roads before they become impassable. The city nursing group was in evidence at the general sessions as well as those of the Public Health Nursing Section; proof in itself that they derived much benefit from the papers given and the discussions which followed. A consideration of problems relating to communicable disease and sanitation was of particular interest and provided incentive for public health nurses to continue to promote the little heralded but basic work of health teaching in the school and the home. The kindly presence of Dr. G. D. Porter, President of the Canadian Public Health Association, at the sessions of the public health nursing section was appreciated and served to remind the nursing group of their share as health workers in the activities and progress of the Association. The topics discussed in the sessions of the nursing section formed a symposium on the teaching of health, and were helpful as a résumé of current thought in that field. Dr. W. A. McIntyre, Superintendent of the Winnipeg Normal School, added a note of encouragement by his pithy remarks on the need for a definite health programme in the secondary schools and his wide outlook on the subject of health teaching as a whole. The nominating

committee, Misses Lindeburgh, McMann and Wells, reported the selection of the following officers for the section during the coming year: Miss Edith Hurley, Montreal, Chairman; Miss Edith Fenton, Halifax, Vice-Chairman; Miss Brenda Chillias, Montreal, Secretary. We offer congratulations and good wishes for the continued success and development of section activities.

At least two representatives of the public health nursing group in Canada attended the sessions of the Public Health Nursing Section of the American Public Health Association in Chicago: Miss Eunice Dyke, Toronto, who participated in the programme, reading a graphic and timely paper on the Public Health Nurse, and Miss Elizabeth Smellie, Ottawa, a newly elected Fellow of the American Public Health Association. Since such membership offers eligibility for office in any section of the association Miss Smellie was appointed councillor of the Public Health Nursing Section. A happy feature of the conference was a dinner party arranged by the President and acting secretary of the National Organization for Public Health Nursing when their guests represented the nursing service of the municipal Department of Health of New York, Cleveland, Chicago and Toronto.

MENTAL HYGIENE

W. T. B. MITCHELL, M.B. AND H. C. CRUIKSHANK, M.B., D.P.H.

REPORT ON CONDITIONS REGARDING THE FEEBLEMINDED

By AGNES LIND SMYTHE,
President, Provincial Council of Women.

From two to two-and-one-half per cent of the population of Canada and the United States are feeble-minded; ten per cent of these require segregation. The following shows briefly what is being done in the various provinces of Canada to deal with this problem:

In *Ontario*, out of a population of approximately 3,000,000, probably between 2,000 and 3,000 require segregation—in addition to those at present in the institution at Orillia—if they are to have a proper chance in life. There are nearly 1,400 patients at Orillia—which is the only government institution in Ontario for the feeble-minded. It is greatly overcrowded and has a long waiting list. There are several private homes in various parts of the province (Niagara Falls, Niagara-on-the-Lake, Ottawa, Toronto) but these do not offer sufficient educational advantages nor opportunity. Toronto has 47 auxiliary classes and, in addition, two industrial auxiliary schools, where the higher grades are given instruction in manual training and domestic science, thus fitting them, in-so-far as they are able to respond, to enter industrial and domestic life.

The report of the Board of Edu-

cation of the city of Toronto shows that 18 per cent of feeble-minded children in Toronto public schools were born outside Canada; 49 per cent were born in Canada of parents who had migrated into Canada since 1900; only 33 per cent were born in Canada of Canadian parents.

The Department of Public Health of Toronto maintains a psychiatrist in charge of the mental examination of school children, a psychiatric social worker, three psychologists and more than one hundred public health nurses who are on the look-out for cases of mental deficiency. There are three psychiatric clinics for children.

The educational system of Ontario takes good care of the feeble-minded up to the age of sixteen years. Then the chain is broken, and the poor unfortunate is thrust out into the world to sink or swim. The records of our courts, hospitals and reformatories tell us how far some of them sink. Judge Mott's official report, covering a period of five years shows that 40 per cent of those appearing in the Toronto Juvenile Court are feeble-minded. And so, after floundering along and spreading evil and disease they are finally gathered in and taken care of at the state's

Abstract from the Report presented at the Annual Meeting of the Provincial Council of Women, June 6, 1928.

expense. Surely, as an economic question alone, it would be cheaper to care for them from the beginning rather than let them spread disease, commit delinquency and crime and add greatly to the feeble-minded population. It is estimated that for every dollar spent in the care and education of the feeble-minded, at least two, and up to five, might be saved in court proceedings, destruction to property, theft, sickness, hospital care or spread of disease.

In *Nova Scotia* the feeble-minded are grouped with the harmlessly insane and with the industrially incompetent in county poor houses. But following a partial survey of mental conditions in the province, an investigation by a Royal Commission has resulted in the passing of legislation providing for special classes in the public schools and for the establishment of a training school on the farm colony plan. A provincial psychiatrist has been appointed, who is at present engaged in making a thorough survey of the province.

In neither *New Brunswick* nor *Prince Edward Island* has any provision yet been made for the feeble-minded, other than the hospitals for the insane; and up to the present there is no indication that a change is contemplated.

Quebec has no compulsory law. The Catholic Women's League has established auxiliary classes in some parts of the province. There are two institutions solely for the feeble-minded in the province, and another in connection with other work. The

government is on the point of conducting a survey to discover the extent of the problem.

Manitoba maintains an institution at Portage la Prairie for the aged and infirm in which a certain number of the feeble-minded are kept; but no provision is made for training. There are special classes in Winnipeg public schools.

Alberta has a training school at Red Deer which has a capacity of 160 children. It is crowded to capacity and there is a long waiting list. Although the inmates are necessarily low grade, emphasis is placed on training.

Saskatchewan has set aside a section of the mental hospital at Weyburn for mental deficients, but otherwise no provision is yet made for this class of unfortunates.

In *British Columbia* mentally deficient are still associated with the insane. A Royal Commission, however, has just recently recommended to the government that (1) special classes be established for retarded children wherever there are sufficient for a class; (2) that vocational high schools be established for children that graduate from the auxiliary classes in the grade schools; (3) that a central training school be established, preferably on the farm colony plan; and (4) that a provincial psychiatrist be appointed. It should be pointed out, however, that the first special classes in Canada for retarded children were established in Vancouver.

CORRESPONDENCE

PUBLIC HEALTH ADMINISTRATION AND EPIDEMICS

To the Editor:

The occurrence of an influenza epidemic has resulted in the making of numerous statements, and in some practices which it might be well for public health officials to consider because of their effect upon the future confidence of people in general as regards public health. On the whole, the advice given to prevent influenza has been to live according to what are generally known as the Health Rules. It is accepted that a hygienic life does promote health and, as such, is to be highly commended, but to what extent does it influence the powers of resistance of the individual to influenza? The thorough washing of the hands does contribute towards reducing the chances of infection, but what relation is there between washing the face and the prevention of influenza? This may seem to be a quibble and yet, when we are told to wash our hands and faces as a means of prevention, should we not expect a question as to why the face? Then, there have been statements crediting the schools with being the source of all outbreaks of communicable disease. Diphtheria is the common communicable disease concerning which we have the most information as regards the age of infection. According to Park, as quoted by FitzGerald in his *Practice of Preventive Medicine*, only forty per cent of the age group, 3-5 years, are susceptible to diphtheria, or, in other words, sixty per cent have received sufficient infection to immunize them in their pre-school years, and it can

hardly be claimed that the majority of this came from school-age children. Is not tuberculosis essentially a house disease, meaning that the infection comes from a member of the family? Do not the majority of pre-school children, at least in the larger centres of population, have as many intimate contacts as the school child? During the hours in the class-room, the contacts are few in so far as concerns the possibility of exchange of secretions. If the child is not in the class-room, where will he be? In the rural area, he may be practically isolated at home on account of distance from his neighbours, but in town and city, he will, in most cases, be playing with his friends, and in play there is every chance of an exchange of secretions and infection. It has also been suggested that every child with a cold be excluded from school. Would it not be well, before making such sweeping generalizations, to consider the practicability of the measure and what is to be gained? Supposing that the child were excluded from school, would he be isolated at home; has this ever been tried in one or more schools and, if so, with what result? Do not adults incur just as much danger and should not the same measure apply to them? This is not written as opposing the measure, but to point out that facts must be supported by experience before a remedy is publicly advocated. If inexact facts are stated, if unsound remedies are advocated, the public is brought to question those which are exact and sound, to the detriment of public health work.

A. Grant Fleming, Montreal.

NEWS OF THE ASSOCIATION

REPORT OF THE GENERAL SECRETARY FOR THE YEAR 1927-28

J. T. PHAIR, M.B., D.P.H.

I WISH to present for your consideration the following brief report of our work during the year. Much that is of interest to the Association has been put into effect since the last annual meeting held in Toronto in June 1927. The executive officers gave careful consideration to the suggestions of the Executive Council regarding the proposed plans for expansion, which were presented at that time. It was the considered opinion of all, that, while the future of the Canadian Public Health Association lay in building up an organization, membership in which would be confined to professional health workers, provision should be made for the membership of such socially-minded individuals who might wish to become associate members in the Association; this has been done. In this way, the objections of those members of Council who felt that the previously advanced recommendations were too drastic, were met. Much consideration was given to a definition of what comprises eligibility for active membership. It was felt that all those who were actually engaged in the professions of medicine, dentistry, nursing, engineering or full-time public health in any of its divisions, or were administrative officers in voluntary health organizations, would be considered eligible. Through associate membership, to all other persons who are interested in advancing the

interests of public health in Canada would be extended the privileges of membership. Briefly, the programme of the Association is to function during the next two years with a voluntary secretary; to interest every professional health worker in the advantages of membership; through the formation of standing Committees, nation wide in their personnel, to bring before the members and through them the public, matters of interest in the field of preventive medicine, particularly those with a Canadian application, and lastly to publish an outstanding Canadian journal in the field of public health.

The officers of the Association took advantage of the opportunity presented at the Canadian luncheon held in Cincinnati at the time of the American Public Health Association meeting in October, 1927, to discuss with many of those prominent in the administrative field of public health, these possible future activities of the Association. It was felt by all those present that the Association had a definite field of usefulness; that the new programme should be undertaken as soon as possible; and that, if possible, an effort be made to take over the operation of THE PUBLIC HEALTH JOURNAL. Your Committee, therefore, early in the new year, made every effort to put these suggestions into effect. The various Provincial Health Associations and

Presented at the Annual Meeting, Winnipeg, October, 1928.

Health Officers,' and the Provincial Graduate Nurses' Associations were approached. It was suggested to each that all active members of the provincial health associations should automatically become members of the Canadian Public Health Association; that the Canadian Public Health Association should, so to speak, act as a parent body, should assist these organizations by meeting periodically with them; and that THE PUBLIC HEALTH JOURNAL should be available for each of their members. So well received have these advances been by all of the provincial health officers, that, with the exception of two of the provinces, all have accepted the suggested proposals.

The officers proceeded with the suggestion of acquiring the JOURNAL, and secured from the York Publishing Company, an option for its purchase at the price of \$1,000.00, which option is to be exercised on or before December 31st, 1928. It will be realized by all those present that the York Publishing Company have acted very generously in this matter, and I might suggest that the thanks of the Association should be expressed to Dr. Gordon Bates, who, for many years, with the minimum of assistance, has edited the JOURNAL, and to the other members who have maintained it during many difficult years. They further obtained the privilege of operating the JOURNAL during the year jointly with the York Publishing Company. An Editorial Board was formed, additional advertising was secured, the JOURNAL was enlarged and made as attractive in appearance as was possible with the limited capital available. A detailed report

of the activities of the Editorial Committee is presented by the Secretary, Dr. C. P. Fenwick.

Three new Standing Committees were appointed during the year, one on Methods of Active Immunization with Dr. Donald Fraser of Toronto as Chairman; one on School Sanitation, and one on Communicable Disease Regulations, under the Chairmanship of Dr. Fred Adams of Windsor; this last committee has been extremely active during the year and it is hoped in the very near future to present a report of their study.

The change in the membership fees recommended last year, and approved, has been put into effect, and a more satisfactory arrangement re collecting fees, etc., has been evolved.

I wish to report that the small school health posters, which were prepared and printed by the Child Hygiene Section some years ago, have been entirely disposed of. There is still available for sale, however, a supply of health blotters. The arrangement regarding the distribution by the Canadian Child Welfare Council, of the diet folders is operating satisfactorily.

It was felt that in keeping with the decision that the meetings alternate between the East, West and Centre, an effort should be made to hold the 1928 meeting in Winnipeg; this suggestion was welcomed by Dr. Douglas and the Hon. Dr. Montgomery, and the attendance at the meeting and the interest evinced on all hands, more than justify the wisdom of the choice.

I regret to report that owing to illness Dr. H. C. Cruikshank has

resigned from the position of Treasurer of the Association. I regret to report also the death of our first Vice-President, Dr. D. A. Clark, Assistant Deputy Minister of Health in the Federal Department; and of Dr. C. M. Anderson of Toronto, who was a member of the Editorial Board. Dr. Clark had for a long time given faithful service to the Association, and his counsel will be missed by the

executive committee. The appointment of Dr. Gordon Jackson, of the Department of Health, Toronto, to fill the vacancy left by the retirement of Dr. Cruikshank has been made.

I should like, in conclusion, to offer my very sincere thanks to the officers and members of the executive committee for the very great help they have given to myself, as your Secretary, during the year.

NEWS AND COMMENTS

P. A. T. SNEATH, M.D., D.P.H.

MOTOR FATALITIES

THE Toronto Bureau of Municipal Research has issued a pamphlet on the subject of deaths caused by motor cars. In 1927 there were 864 persons of all ages killed in motor accidents, British Columbia leading with a death-rate of 13.4 per 100,000 population. Ontario ranks second with a rate of 12.1 per 100,000 and the other provinces as follows: Quebec 9.7; New Brunswick 5.8; Alberta and Nova Scotia 5.7; Manitoba 4.9; Saskatchewan 2.9; and Prince Edward Island 2.3 per 100,000.

With 947,476 motor vehicles or one for every ten persons in the Dominion, the average number of fatalities for the same area is 9.1 per 100,000. It, therefore, becomes necessary to look upon the motor-car as a modern Juggernaut, and rather than viewing this wholesale slaughter as a visitation of Fate, it is time that some organized means of prevention be developed. Should 864 persons be cut off in a shipwreck or a train wreck, the country would be horror-

stricken and occasion would arise for sweeping investigations. However, for some perverse reason little advance seems to have been the result of our rising death-rate from motor-car fatalities. Does incarceration on the charge of reckless driving alone meet our responsibilities in this matter?

OLD AGE PENSIONS

AT the end of September last, 6,820 old age pensions had been paid in Canada at a cost of \$711,429.12, one-half of which was borne by the Federal Government. The provincial contributions to this scheme were as follows: British Columbia \$314,526.16 to 3,422 pensions; Saskatchewan \$18,516.43 to 927 pensions and Manitoba \$22,671.55 to 2,451 pensions.

NOVA SCOTIA

A new Hospital for Infectious Diseases was opened in Halifax in October. The hospital is associated with Dalhousie Medical School and has capacity for about fifty patients.

Dr. A. C. Jost, Health Officer of the Province for the past six years, and for more than twenty years engaged in public health work in Nova Scotia, has been appointed Executive Secretary of the State Board of Health, Delaware, U.S.A., succeeding Dr. T. Davis. He assumed his new duties on January 1st, 1929. He carries with him the respect of the profession and the good will of the people of Nova Scotia, for whose interests he has always laboured.

NEW BRUNSWICK

REQUESTS have been received by the Provincial Red Cross Society for the establishment of outpost hospitals at Clare and on the island of Grand Manan, neither of which is well supplied with transportation facilities. The reports from the outpost hospital at St. Leonard's indicate that the hospital is providing an excellent service to that community.

Dr. J. A. Melanson has been appointed as travelling tuberculosis diagnostician for the province; Dr. J. M. Cruikshanks has accepted the appointment of Medical Officer in the British Government Hospital at Nassau, Bahamas.

Miss Mary F. Bliss, Superintendent of the Soldiers' Memorial Hospital at Campbellton has resigned to accept a similar position in Guelph, Ontario.

QUEBEC

THE late Lady Osler, widow of Sir William Osler, left the sum of \$50,000 for the upkeep of the Oslerian Library at McGill University.

Forty-seven cases of smallpox of a

mild degree without any deaths have been reported from the Indian reservation at Caughnawaga about fifteen miles outside Montreal. The reservation has been placed in quarantine and communications with the city of Montreal have been closed.

An oak tree was recently planted in the grounds of McGill University to the memory of the late Colonel John McCrae, physician and teacher, soldier and poet. The tree was presented by the Teachers' College of the University of Georgia.

The opening of Bourget Sanatorium, a wing of St. Jean de Dieu Hospital, Longue Pointe, completely equipped with observation and treatment wards, class rooms, laboratories and offices marks a new day in the treatment of the mentally diseased.

ONTARIO

SPEAKING at the annual meeting of the Canadian Life Insurance Officers in Toronto, the Dominion Statistician and Controller of Census, R. H. Coats, B.A., F.R.S.S., stated that the first census of Canada was taken in 1666 and noted that in Great Britain as late as 1756 it was illegal to make such. Mr. Coats also noted that within the last twelve years the ratio of infant deaths in Toronto has been reduced from the proportion of one in nine to one in fourteen of the infant population.

Professor Andrew Hunter who has occupied the Chair of Biochemistry in the Faculty of Medicine since 1919 at the University of Toronto, coming there from Cornell University, is

about to sever his associations at Toronto on appointment to the Gardner Chair of Physiological Chemistry at the University of Glasgow. To those of us who have had the privilege of attending Dr. Hunter's classes, his charm of manner and clarity as a lecturer have always been matters of comment, and along with those who know him from other angles our regret at his departure is only tempered by the fact that this new appointment in the land of his birth, in addition to honoring him, affords him still greater opportunities in his chosen field.

The Creamerymen's Association recently passed a resolution asking for legislation amending the Dairy Products Act of 1927, requiring that cream used for making butter be properly pasteurized before use as such. A clause of this nature was originally included in the Act, but was not "gazetted", it being thought better not to force the issue prematurely. In addition to preventing diseases transmissible to man by this means, pasteurization has an economic factor in that cream so treated produces butter with better keeping qualities.

During the past year the Ontario Division of the Canadian Red Cross Society has established four new out-post hospitals bringing the total of such in the province up to twenty-three, the whole affording treatment to patients in excess of six thousand.

The Toronto Board of Education, on the recommendation of Col. W. C. Michell, Senior Principal of Toronto High Schools, has approved of the

institution of the health inspection service in the secondary schools of the city. The Board is requesting the Medical Officer of Health to provide for this item in the 1929 budget of his department. This service will mean the extension of the school medical inspection to some 18,000 pupils in secondary schools in Toronto.

Dr. Alexander McPhedran, Professor Emeritus in the Faculty of Medicine, University of Toronto, on the 10th of December celebrated his eighty-first birthday and was the recipient of many felicitations on that occasion.

New legislation revising the Hospitals and Charitable Institutions Act is to be anticipated at the next session of the Ontario Legislature. Certain features of the revision may probably be anticipated from the remarks made by the Provincial Secretary before the Ontario Hospital Association in October with reference to the extra charges made to patients for laboratory and nursing services, and also his warning to municipalities which have been failing to maintain their contributions equally with government. Further there will probably be included in the revision the appointment of an inspecting officer to public hospitals as suggested last session by the Premier of the Province.

The effect of the regulations drawn up by the Provincial Department of Health in 1926 for the protection of caisson workers is amply shown by the statement of compensation paid to disabled workmen or their dependents of this class by the

Ontario Workmen's Compensation Board. For the second half of 1926, the Board paid \$16,821. For the first half of 1927 payment of \$2,482 was made on this score and for the second half-yearly interval the payment was reduced to \$998; finally only \$15.07 was paid during the first half year of 1928. Nothing could be more convincing to the taxpayer or employer of labour than such a reduction. It is indeed unfortunate that public health efforts do not always lend themselves to such striking demonstrations. However, granted the authority, the co-operation of the public and the means to enforce legislation, many of our efforts might be shown to have the economic value that the above features so well.

The new Convalescent Home at Thistletown, in connection with the Hospital for Sick Children, Toronto, was formally opened in October and the children who summered at the Lakeside Home were transferred directly to the new building.

MANITOBA

DR. J. A. Amyot, Deputy Minister of Pensions and National Health, was present at the ceremony of laying the corner-stone of the new Deer Lodge Military Hospital.

Hon. Dr. E. W. Montgomery has returned from a tour of observation through Ohio and Tennessee in connection with rural health organization. At the meeting of the Winnipeg Medical Society in November he presented a paper on "Organization of a Full-time Rural Health Unit".

The first News Bulletin of the Department of Health and Public Welfare of Manitoba was issued on November 1st.

SASKATCHEWAN

THE Canadian Dental Hygiene Council with the co-operation of various local organizations has recently completed a campaign in the Province of Saskatchewan designed for the education of the public in the relationship of oral hygiene to general health. The oral condition of the school children was assessed by nearly 100,000 inspections and a report on the findings forwarded to the parents who were thereby stimulated to have faulty conditions repaired. A travelling clinic was maintained reaching many of the more isolated rural districts and affording free treatment to hundreds of children otherwise unable to obtain such. It is stated that this campaign in addition to having aroused public interest and stimulated the dental profession has provided the necessary impetus for the introduction of new legislation whereby municipal funds may become available for the introduction of preventive dentistry into the public health programme. This effort is most valuable in that a large proportion of the population have their origin in European countries.

Dr. M. M. Seymour was tendered a farewell banquet by the members of the Regina and District Medical Society at the Hotel Saskatchewan prior to his departure for California, and presented with a silver tray suitably engraved. Dr. Seymour has retired from the post of Deputy-Minister of Public Health in Saskatchewan, but is continuing his connection with the Department in an honorary advisory capacity for a few months.

OBITUARY

PETER LAMONT GRAHAM

In the passing of Peter Lamont Graham at his late residence, Lobo Village, on Sunday morning, November 4th, the medical profession of Ontario lost one of its pioneer physicians.

He was in his 84th year, having been continuously in practice over 51 years. He was born in Lobo March 25th, 1845, the second son of the late Duncan Graham and Christina Lamont, who came with their parents from Argyleshire, Scotland, in 1830.

Following his early education at the public school in Lobo, he began his career as a public school teacher in 1863. After teaching for eleven years, he entered the Medical School of Trinity College, from which he graduated in 1877. Following a post-graduate course in New York, he commenced practice in Bothwell, Ontario, where he married Mary Reid on January 3rd, 1878. In 1881 he came to Lobo, and has been in continuous practice over 47 years.

His practice in this community for such a long period enabled him to carry on the practice of the art of Medicine as a real family physician. In the earlier days this demanded not only a knowledge of life, which enabled him to minister not only to the bodily ills, but to act as counsellor and friend in so many problems irrelevant to Medicine. It is to this type of family physician that the profession of Medicine owes its present enviable position in the community.

Dr. Graham had been Medical Officer of Health for the various townships in the vicinity of Lobo in his many years of practice and at the time of his death was Medical Officer

of Health for Lobo township. These duties he assumed with an unusual sense of the responsibilities entailed. Preventive medicine and public health were inseparable from his practice. His commanding figure, his quick interest in all the questions discussed and his quiet, unobtrusive manner will be greatly missed at the annual meetings of the Ontario Health Officers which he attended regularly.

He is survived by his wife and four children, one daughter, Ella, at home, and three sons, all doctors: Roscoe R. Graham, a prominent surgeon of Toronto; Stanley G. Graham, practising in connection with the University of Glasgow, Scotland; and Wilfrid L. Graham, in Vancouver.

He was an enthusiastic Mason, having been Secretary of Doric Lodge A.F. and A.M. for over forty years. His interest and influence in public affairs of the community was very great, and despite the calls of his profession, he was in his quiet way always active in aiding the local organizations in the solution of their problems. To fill the place of such a man in a rural community is indeed a difficult task.

The funeral was held from his late residence on Tuesday, November 6th, 1928, at 2 p.m. and was conducted by Rev. Mr. Oliver, pastor of Ivan United Church, assisted by the Rev. Mr. Campbell, a former pastor.

Interment took place in Ivan Cemetery, where he rests after his labours beside the hardy highland pioneers with whom he laboured during the early development of Middlesex County.

H. D. Johnson

BOOK REVIEWS

D. T. FRASER, B.A., M.B., D.P.H. and R. R. McCLENAHAN, B.A., M.B., D.P.H.

Publicity for Social Work — By Mary Swain Routzahn and Evart G. Routzahn, Department of Surveys and Exhibits, Russell Sage Foundation. New York, Russell Sage Foundation, 1928. pp. 376. Price \$3.00.

Every person engaged in public health work will find information of real value in "Publicity for Social Work". We are all called upon to speak in public, often to arrange and conduct meetings and almost every day to consider some phase of public health education. Training courses are not available either in the United States or Canada which prepare students to engage in public health education and publicity work. This book has, therefore, been prepared to help fill the gap which is all too evident in the training of social workers. From the rich experience of Dr. and Mrs. Routzahn as directors of the Department of Surveys and Exhibits, Russell Sage Foundation, from the wealth of facts and suggestions, are pointed out in a most helpful manner the errors often made and it is shown how these may be prevented and the whole presentation improved.

The book consists of 376 pages set with eleven point type, which one learns from the chapter on "The Physical Make-up of Printed Matter", is a particularly easy type to read. The use of type of other sizes for quota-

tions, etc., and the careful attention to headings make every page a model for the reader to copy in his own writing. The illustrations have been selected with care and in every case serve the purpose intended.

The enumeration of the headings of the six parts into which the book is divided will give an idea of the scope of this work: Part I—Analysis of the Task (attracting attention, holding attention, obtaining goodwill, obtaining a response); Part 2—Social Work and the Newspaper (composition of a newspaper, social work as a source of news, getting into print); Part 3—Printed Matter (types of printed matter, the physical make-up of printed matter, decoration and illustration of printed matter, copy, etc.); Part 4—Meetings (public speaking, arranging and conducting meetings); Part 5—Special Occasions (dramatic methods, fairs, expositions); Part 6—The Intensive Campaign (newspaper, speaking, radio, motion pictures, literature, etc.). But such recital of chapter headings fails to give any idea of the satisfactory manner in which the chapters are presented. The book will be read with real appreciation by every public health and social worker and will be constantly referred to for an understanding of the fundamental principles of publicity and of the best in its practice.

R. D. D.

International Clinics. Volume 1, Thirty-eighth series, March 1928. J. B. Lippincott Co., 201 Unity Building, Montreal.

In the first article on visceroptosis, mention is made of the need of training the young as to proper posture in order to prevent this malady. The article on the change in the clinical picture of syphilis is most interesting. A very complete and concise account of tularaemia is given.

The above articles are mentioned from amongst much other interesting material because of their interest in a public health sense.

A. M. JEFFREY.

Nutrition in Health and Disease. By Cooper, Baker and Mitchell. F. B. Lippincott Company, Philadelphia, 1928. 574 pp. Price \$3.00.

One appreciates, from the mere consideration of the title, that the authors have set themselves a very arduous task. This task becomes increasingly arduous when one appreciates that within recent years fundamental research in nutrition has revolutionized our conception of dietetics. The problem of adapting practice to precept is never easy but nowhere more difficult than in the matter of diet.

The book is one of a series of nursing manuals. It presents the newer ideas in both the principles of nutrition and the practice of dietetics, and is designed as a teaching manual and text-book as well as a source of infor-

mation for the liberal arts student and busy housewife. The subject matter is divided into four sections—Principles of Nutrition, Food Selection, Diet in Disease, and Cooking for the Sick and Convalescent. A well arranged appendix contains tables of food values and suggestions to teachers. The use of heavy type detracts both from the appearance of the book and the ease and pleasure with which it might otherwise be read. Once committed to this type it becomes increasingly difficult to avoid wrong emphasis and even absurdities. Though names of authors with their references are frequent and highly desirable, the use of names only detracts considerably from the text. It is manifestly unfair to separate an illustration from its context, but the blacksmith on page fifty-eight who hammers the iron with such violence as to make it glow must possess superhuman athletic ability as well as accomplishing a commendable economy of coal. Surely the question of the possibility of infection of man with the bovine strain of *B. tuberculosis* is not still in doubt. Is pasteurized milk not always safer than certified raw milk? The topics of foods for the foreign born and the cost of foods are happily chosen.

The book is excellent and can be highly recommended to those for whom it is written. It is sound, practical and presents the newer conception of nutrition clearly.

D. F.

NATIONAL VOLUNTARY HEALTH AGENCIES

RUBY E. HAMILTON, Reg.N.

ANTE-NATAL SERVICE OF THE VICTORIAN ORDER OF NURSES

THE Victorian Order does not limit itself strictly to bedside nursing which is its fundamental principle, but its activities include many phases of work concerned with family and community welfare. Chief perhaps among these "other activities" is the ante-natal service offered by the Order whereby, with the consent and under the direction of the family physician, supervision may be maintained over the expectant mother throughout the entire ante-natal period. A patient upon being referred to the Victorian Order receives a visit from the nurse once a month up to the seventh month, when the visits are increased to bi-monthly, or oftener, if in the judgment of the nurse the nature of the case indicates need for closer supervision. The first visits are devoted, for the most part, to securing favourable contact with the patient. She is advised to report frequently to her doctor. On subsequent visits she receives carefully planned instruction in such subjects as diet, exercise, clothing, care of the teeth, care of the breasts and preparation of supplies for home confinement.

CANADIAN TUBERCULOSIS ASSOCIATION

GREETINGS are offered to the readers of the CANADIAN PUBLIC HEALTH JOURNAL from the Canadian Tuberculosis Association.

1928 has been one of the greatest years in actual accomplishment.

We assisted thirty-five doctors, who occupy leading positions in eight provinces in Canada in the anti-tuberculosis campaign, to visit thirty-six institutions in England, Wales, Scotland, France, Italy and Switzerland, which institutions care for all types of tuberculosis, and to attend twenty-seven tuberculosis field work activities in the same countries.

The Maritime Tuberculosis Educational Committee, financed by the Canadian life insurance companies, has observed most encouraging results. Death rates from tuberculosis reached new low marks in two of the Maritime provinces. Prince Edward Island, thanks to its efforts, has a full-time Medical Officer of Health specially qualified for the institution of a county health scheme and for the care of sufferers from tuberculosis.

The Department of Indian Affairs has received splendid credit in England for the tuberculosis survey among the Plains Indians and is launching a further helpful programme in British Columbia.

The Three Rivers Demonstration after five years successful activity is being extended for an additional period of two years. Three additional full-time members have been added to the personnel in 1928. Further help in Quebec has been approved by our executive in increasing expert diagnostic facilities.

CURRENT HEALTH LITERATURE

D. T. FRASER, B.A., M.B., D.P.H.,

The Treatment of Lobar Pneumonia with Refined Specific Anti-Bacterial Serum—This report gives a favourable outlook to the use of a specific antiserum not only for type I infection, but also in some degree for types II and III and a possibility of success in certain type IV infections. Felton has prepared a product which is stated to retain almost the full strength of the serum antibodies of the original serum with but little protein. The conclusion is drawn, "that the time has arrived when the biologic plants should undertake the production of the refined polyvalent pneumococcus antibody solution by the method of Felton or that of Banzhaf, or by a better one if it can be developed."

PARK, WILLIAM H., BULLOWA, JESSE G. M. and ROSENBLUTH, MILTON B. J.A.M.A., Vol. 91, No. 20, p. 1503.

Immunization with Formalized Tetanus Toxin—In corroboration of the findings of others, formalized tetanus toxin (anatoxine) is safe and efficacious in inducing a durable immunity in animals and man.

FORTNER, J. Zschr. f. Hygiene und Infektionskrankh, 108 Band 4, July, 1928.

Treatment and Prophylaxis of Scarlet Fever with Specific Antitoxic Serum—The experience of the writer corroborates that of others in the beneficial use of scarlet fever antiserum. Amongst others of his

conclusions he mentions—the full therapeutic dose should be given at the earliest possible moment; when given within the first three days of disease it lessens the incidence and reduces the severity of complications; beyond the third day complications are not influenced.

C. B. CRAIG. Lancet, Dec. 1st, 1928, p. 1123.

The Relation of the Practising Physician to Public Health Activities

The author points out how essential the practice of medicine and the promotion of public health are to a community. His thesis is that the public health officer and the physician are co-partners; each can assist the other materially. There is now an ever-increasing demand by patients not merely to be cured of present illness, but for instruction in methods of preventing recurrences in themselves or in their families. Examples are given to show that the health department instead of supplanting the physician, becomes an indirect agent for him to induce people to have whatever medical or surgical service they need. The plea is put forth that the placing of all health work under one head, preferable a full time man not in the practice of curative medicine, tends to uniformity, economy and general efficiency.

WALLACE, JAMES, T. Can. Med. Association Journal, Oct. 1928.

